

JUN 20 2005



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
PROGRAM PLANNING AND INTEGRATION  
Silver Spring, Maryland 20910

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

**TITLE:** Programmatic Environmental Assessment for the NOAA Coral Reef Conservation Grant Program

**LOCATION:** Coral reefs in Florida, Hawaii, Texas (Flower Gardens National Marine Sanctuary), Puerto Rico, U.S. Virgin Islands, Navassa Island, American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, the U.S. Freely Associated States, and internationally in other countries with coral reefs

**SUMMARY:** The National Oceanic and Atmospheric Administration (NOAA) has prepared this Programmatic Environmental Assessment (EA) to assess the environmental impacts associated with the implementation and distribution of grant funds under the Coral Reef Conservation Act of 2000. The Coral Reef Conservation Grant Program (CRCGP) provides funding to eligible coastal state and territorial governmental agencies, non-government organizations, educational institutions, individuals, and international partners to conduct several types of activities that will improve understanding of coral reef ecosystems, promote wise management and sustainable use, reduce threats contributing to the decline and loss of fragile coral reef resources and ecosystems, and restore the condition of coral reefs. There are six types of projects that NOAA is proposing to fund, including U.S. state and territorial government management and monitoring activities; general and international coral reef conservation activities; the development, improvement or amendment of Fishery Management Plans; and coral reef ecosystem research.

Three alternatives are available to NOAA pertaining to the CRCGP: provide grant funds for a combination of the various categories eligible for CRCGP funds; conditionally approve awards that do not immediately meet all of the grant requirements; and do not provide funds for CRCGP activities. NOAA's preferred alternative is to provide CRCGP funds to a variety of eligible applicants to cover a combination of activities. NOAA finds that the CRCGP meets the requirements of the Coral Reef Conservation Act of 2000. This alternative will have a beneficial effect on the coral reef ecosystems because it will fulfill the intent of the legislation by 1) preserving, sustaining, and restoring the condition of coral reef environments; 2) developing sound scientific information on the condition and threats to their environment; and 3) promoting wise management and sustainable use of coral reefs that will benefit local communities and the Nation.

**RESPONSIBLE OFFICIAL:** Richard W. Spinrad, Ph.D., National Ocean Service, 1305 East-West Highway, Silver Spring, MD 20910 (301-713-3074, Ext. 154).

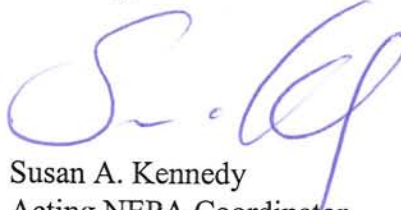


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The environmental review process led us to conclude that this action will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared. A copy of the finding of no significant impact including the supporting environmental assessment is enclosed for your information. Please submit any written comments to me in Room 15625, SSMC 3, NOAA Strategic Planning Office, 1315 East West Highway, Silver Spring, MD 20910.

Sincerely,



Susan A. Kennedy  
Acting NEPA Coordinator

Enclosures



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Silver Spring, Maryland 20910

JUN 14 2005

MEMORANDUM FOR: Susan A. Kennedy  
Deputy Director  
Strategic Planning Office

FROM: Richard W. Spinrad, Ph.D.  
Assistant Administrator

SUBJECT: Programmatic Environmental Assessment Finding of No  
Significant Impact for the NOAA Coral Reef Conservation Grant  
Program

Based on the subject Programmatic Environmental Assessment, I have determined that no significant environmental impacts will result from implementation of the NOAA Coral Reef Conservation Grant Program. I request your concurrence in this determination by signing below. Please return this memorandum for our files.

1. I concur.

6/20/05  
DATE

2. I do not concur.

DATE

Attachments






UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE  
1315 East-West Highway  
Silver Spring, Maryland 20910

THE DIRECTOR

MEMORANDUM FOR: Susan A. Kennedy  
Deputy Director  
Strategic Planning Office

FROM:  William T. Hogarth, Ph.D.  
Assistant Administrator for Fisheries

SUBJECT: Finding of No Significant Impact on the Programmatic  
Environmental Assessment for the NOAA Coral Reef  
Conservation Grant Program

Based on the subject Programmatic Environmental Assessment, I have determined that no significant environmental impacts will result from the proposed action. I request your concurrence in this determination by signing below. Please return this memorandum for our files.

1. I concur.    
DATE

2. I do not concur. \_\_\_\_\_  
DATE

Attachments

THE ASSISTANT ADMINISTRATOR  
FOR FISHERIES







UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
Silver Spring, MD 20910

OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH

MEMORANDUM FOR: Susan A. Kennedy  
Deputy Director  
Strategic Planning Office

JUN 10 2005

FROM: Richard D. Rosen, Ph.D. *RDR*  
Assistant Administrator

SUBJECT: Finding of No Significant Impact on the Programmatic  
Environmental Assessment for the NOAA Coral Reef Conservation  
Grant Program

Based on the subject Programmatic Environmental Assessment, I have determined that no significant environmental impacts will result from the proposed action. I request your concurrence in this determination by signing below. Please return this memorandum for our files.

1. I concur.

DATE

*6/20/05*

2. I do not concur.

DATE

Attachments



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# **Programmatic Environmental Assessment**

## **NOAA Coral Reef**

### **Conservation Grant Program**

JUNE 2005

National Ocean Service  
National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

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## LIST OF ACRONYMS

CE	Categorical Exclusion
CNMI	Commonwealth of the Northern Mariana Islands
CRCGP	Coral Reef Conservation Grant Program
CRCP	NOAA Coral Reef Conservation Program
DOC	Department of Commerce
DOI	Department of the Interior (DOI/OIA)/Office of Insular Affairs
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FDA	Food and Drug Administration
FKNMS	Florida Keys National Marine Sanctuary (NOAA)
FMC	Fishery Management Council
FMP	Fishery Management Plan
HAPC	Habitat Area(s) of Particular Concern
HC	Habitat Conservation Office (NMFS/NOAA)
IAO	International Affairs Office (NOAA)
ICRI	International Coral Reef Initiative
MPA	Marine Protected Area
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NGO	Nongovernmental Organization
NMS	National Marine Sanctuary (NOAA)
NCCOS	National Centers for Coastal Ocean Science (NOAA)
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service (NOAA)
NURP	NOAA Undersea Research Program
OAR	Oceanic and Atmospheric Research (NOAA)
OCRM	Office of Ocean and Coastal Resource Management (NOAA)
OIA	Office of Insular Affairs (DOI)
ORR	Office of Response and Restoration (NOAA)
OTC	Oxytetracycline
PEA	Programmatic Environmental Assessment
SAC	Special Award Condition
SFA	Sustainable Fisheries Act of 1976
USCRI	United States Coral Reef Initiative
USCRTF	United States Coral Reef Task Force
VIFE	Visible Implanted Fluorescent Elastomer
WPCA	World Commission on Protected Areas

## EXECUTIVE SUMMARY

The purpose of this Programmatic Environmental Assessment (PEA) is to analyze: 1) the Coral Reef Conservation Grant Program (CRCGP); 2) annual issuance of guidelines for projects submitted to the CRCGP; and 3) typical future funded projects. This PEA describes the potential environmental impacts of the overall implementation of a legislatively authorized and funded multi-year CRCGP. The CRCGP provides funding to eligible coastal state and territorial government agencies, non-government organizations, educational institutions, individuals and international partners, to improve understanding of coral reef ecosystems, promote wise management and sustainable use, reduce threats contributing to the decline and loss of fragile coral reef resources and ecosystems, and restore the condition of coral reefs. The CRCGP, as authorized under the Coral Reef Conservation Act of 2000 (Act, 16 U.S.C. 6401 et seq., P.L. 106-562, see Appendix D), is intended to support a wide range of coral reef conservation projects, from developing sound science to enhancing compliance with management programs and increasing public knowledge of coral reefs.

The stated purposes of the Act, which was enacted on December 14, 2000, are:

1. To preserve, sustain and restore the condition of coral reef ecosystems;
2. To promote the wise management and sustainable use of coral reef ecosystems to benefit local communities and the Nation;
3. To develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems;
4. To assist in the preservation of coral reefs by supporting conservation programs, including projects that involve affected local communities and non-governmental organizations;
5. To provide financial resources for those programs and projects; and
6. To establish a formal mechanism for collecting and allocating monetary donations from the private sector to be used for coral reef conservation projects.

Achieving purposes 1-4 is intended to provide positive environmental, social and economic impacts to vulnerable coral reef environments and the users dependent on those ecosystems. Purposes 5-6 help provide the means for accomplishing those purposes.

Coral reefs are some of the most biologically rich and economically valuable ecosystems on Earth. They provide a wide variety of valuable products and services in the U.S. and in other countries, including:

- Economic stability and food security for millions of people;
- Chemicals and pharmaceuticals that contribute to improved human health;
- Environmental services such as shoreline protection;
- Areas of natural beauty and biodiversity; and
- Sources of revenue and employment through tourism and other industries.



Coral reef ecosystems are in serious jeopardy, primarily due to the impacts of a variety of human activities. Coral reefs are threatened by over-exploitation and destructive fishing practices; pollution and sedimentation associated with coastal development, deforestation, and agriculture; habitat loss from dredging and shoreline modification; vessel groundings and other direct physical impacts; invasive species; disease outbreaks; and other impacts associated with climate change such as coral bleaching, increased storm frequency and changing sea level. By some estimates, 27 percent of the world's reefs have effectively been lost, with 16 percent attributed to the massive climate-related coral bleaching event of 1998 and 11 percent lost due to human impacts<sup>1</sup>. The rapid decline and loss of these valuable marine ecosystems have significant social, economic, and environmental consequences in the U.S. and around the world.

The CRCGP supports projects under six categories through grants and cooperative agreements, including

- 1) U.S. state and territorial government management activities;
- 2) U.S. state and territorial government monitoring activities;
- 3) General coral reef conservation activities;
- 4) International coral reef conservation projects;
- 5) Projects to develop, improve or amend Fishery Management Plans (FMPs); and
- 6) Coral reef ecosystem research.

Each project is from 12-18 months in duration. The CRCGP funds and implements projects in Florida, Hawaii, Texas (Flower Gardens National Marine Sanctuary), Puerto Rico, U.S. Virgin Islands, Navassa Island, American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI), Guam, the U.S. Freely Associated States, and internationally in other countries with coral reefs.

The award of grants follows a specific process, which includes steps to ensure compliance with the National Environmental Policy Act (NEPA) and other applicable laws and regulations. The CRCGP grant process generally includes the following steps:

- An announcement of the opportunity for Federal funding is issued, which includes requirements for information pertaining to NEPA compliance.
- Organizations prepare and submit preproposals for project grants, which should include enough detail for the National Oceanic and Atmospheric Administration (NOAA) to make a NEPA compliance and documentation determination.
- The CRCGP evaluates the applications through a peer-review process and internal NOAA panel, including the information pertaining to NEPA compliance, using a standard evaluation worksheet.
- The CRCGP arrives at a decision on a suite of possible projects to recommend for funding.
- The CRCGP staff responsible for each of the six grants program categories use a NEPA checklist (see Appendix C) to document specific information and to determine if the project and potential impacts are addressed in this PEA. If



so, no further environmental review is conducted other than completion of the NEPA checklist. If the project is not addressed in the PEA, an environmental impact review such as a Categorical Exclusion (CE), Environmental Assessment (EA) or Environmental Impact Statement (EIS) will be completed as appropriate.

- The CRCGP staff work with each applicant to prepare the appropriate level of NEPA documentation (CE, EA, or EIS, as appropriate), if they have an application that falls outside of the PEA.
- Each award may have Special Award Conditions (SACs) that the CRCGP imposes on grantees with respect to environmental compliance.

## **PURPOSE AND NEED**

The purpose of the proposed action is to support local and national partnerships with resource management agencies, educational institutions, non-government organizations and community groups through which coral reef conservation actions are realized. For more than a decade, scientists, policy makers, and national leaders have been expressing a growing concern over the deterioration of coral reef ecosystems due to the impacts of rising temperatures, increasing coastal development, and persistent overfishing of reef systems. The CRCGP serves as one means to address these issues by supporting projects within local jurisdictions that provide information needed to understand the status and trends of coral reef ecosystems, identifying and implementing techniques and approaches to mitigate threats or improve management, and educating user groups on the importance of reefs and actions they can take to conserve reefs. Viable and healthy coral reefs are important to maintaining healthy fish stocks. Effective conservation, management and restoration projects for coral reefs would help rebuild fisheries stocks and recover certain threatened and endangered species. In addition, conservation of coral reefs is necessary to ensure that these valuable resources are available to future generations that are dependent on these resources for their livelihood and for cultural and social values.

## **PROPOSED ACTION AND ALTERNATIVES**

The proposed action is to award grant funds to various groups for coral reef conservation activities involving one or more of the following categories: state and territory management, state and territory monitoring, general coral reef conservation, projects to develop, improve or amend FMPs international coral reef conservation, and ecosystem research. Due to the broad scope of each of these grant programs, each category is described by thematic area and project type.

The state and territory management category would include implementation of projects to mitigate impacts associated with fishing, land-based pollution, marine pollution, global climate change, natural stressors and extreme events, invasive species, and overuse for recreational or other purposes. Project types include, but are not limited to implementation and evaluation of marine protected areas (MPAs), coastal zone management initiatives, development and implementation of restoration and mitigation



efforts, mapping and characterization of coral reefs and associated habitats, and implementation of Local Action Strategies.

The state and territory monitoring category would include implementation of projects to characterize and evaluate the status and trends of benthic habitats, biological community structure and water quality. Project types include efforts to characterize the condition of benthic coral reef habitats, map benthic habitats using aerial photography and satellite imagery, evaluation of the status and trends in fishes, corals, commercially and ecologically important coral reef invertebrates, and algae, and water and substrate quality.

The general coral reef conservation category would include implementation of projects to preserve, sustain and restore the condition of coral reef ecosystems, promote the wise management and sustainable use of coral reef resources, increase public knowledge and awareness of coral reef ecosystems and issues regarding their conservation, and develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems. Project types include biological monitoring, ecosystem research, development of restoration approaches, fisheries and MPA management, reduction of pollution, capacity building, and education and outreach.

The projects to develop, improve or amend FMPs category would include implementation of projects to obtain information needed to promote sustainable use of coral reef resources and non-destructive fishing practices. Project types include identification, mapping and characterization of essential fish habitat (EFH), monitoring reef fish stocks, efforts to reduce overfishing and adverse effects of fishing and fishing gear, assessment of effectiveness of fishing regulations, education and outreach to recreational and commercial fishers, and studies on ecosystem-scale processes.

The international coral reef conservation category addresses national priorities in international coral reef conservation. This category would include implementation of projects to shape and develop comprehensive and environmentally sound coral reef policy, strengthen international conventions, and foster strategic partnerships to address international threats to coral reef ecosystems. Project types include efforts to promote effective watershed management and reduce land-based sources of pollution, implementation of coral reef protected areas (MPAs) and evaluation of the effectiveness of management of MPA's, monitoring of coral reef condition, and socio-economic monitoring.

The ecosystem research category would include implementation of research projects on overfishing, pollution, coral disease and bleaching, invasive species, and the impact of these stressors on coral reef ecosystems, fisheries population dynamics and ecology, effects of anthropogenic stressors on benthic invertebrates, impacts and spread of invasive species, and evaluation of management actions and strategies.

Other possible alternatives include the no action alternative, i.e., not providing funds to eligible grant recipients to conduct approved coral reef activities and conditional approval of awards that do not immediately meet all of the requirements.

## **AFFECTED ENVIRONMENT**

A primary objective of the CRCGP is to promote sound science to improve the understanding of coral reef ecosystems and to identify and implement strategies to mitigate threats responsible for the decline of coral reefs. The jurisdiction of the program covers all areas with shallow water coral reef ecosystems including coral reefs, mangroves, seagrass beds and other associated habitats within the insular U.S., U.S. territories, Freely Associated States, and other countries, that include, or directly or indirectly influence the benthic invertebrates, algae and fishes that utilize these habitats.

The PEA describes the physical, biological and social environments of coral reefs and associated habitats. The following resources are described: corals, coral reefs and coral reef ecosystems, mangroves and seagrass beds, water quality, socioeconomics and environmental justice, living marine resources and EFH, and endangered species.

## **SUMMARY OF ENVIRONMENTAL IMPACTS**

The positive environmental consequences of the implementation of the preferred alternative include enhanced conservation and management measures intended to protect fragile coral reefs and their ecosystems. Negative consequences are expected to be minimal, including temporary impacts associated with field research (e.g., sample collection), and monitoring programs (e.g., installation of permanent markers). Management techniques such as new regulations and increased law enforcement to reduce fishing effort and eliminate destructive gears and/or prohibit the take of vulnerable coral reef resources could also potentially have temporary negative economic impacts for local fishermen.

The cumulative negative impacts associated with multiple grants that are funded within individual jurisdictions are expected to be minimal and insignificant. In some cases individual applicants receive annual funding for various projects that occur in the same location (e.g., State and Territorial Monitoring) however, these activities are non-invasive, do not involve manipulations of the environment, and only have temporary minor impacts while conducting the work (e.g., diver presence temporarily affects behavior of fishes) which disappear once the divers leave the water. In other cases, multiple projects will be funded within one jurisdiction over the life of this CRCGP, but the activities are not carried out in exactly the same location or do not involve the same organisms (e.g., one group may monitor water quality and another monitors fish and benthic communities). If any activities involve substantial modifications of these environments (e.g., restoration) or manipulations of organisms found in these environments (e.g., removal of invasive or pest species or reintroduction of missing trophic groups), subsequent activities proposed for these same locations would be analyzed in detail to ensure that they will not affect the success of previous activities or have cumulative negative impacts in that location.



The cumulative environmental consequences of achieving grant and individual project objectives over the life of the CRCGP will be positive with respect to dealing with anthropogenic impacts to coral. However, funding of these grants does not ensure significant improvements of the environment because: 1) cause of decline may be natural and outside of management control; 2) projects typically focus on a very small spatial scale and many of the threats may be regional or global; 3) projects may identify various options to mitigate decline but because most coral reef resources are in state and territorial waters the implementation of effective conservation and management measures is the sole responsibility of the respective state or territorial management agency; and 4) there are multiple stressors impacting reefs, not all of which may be under NOAA's mandate, and most projects only focus on addressing particular stressors.

## CONCLUSIONS

This PEA considers the potential environmental, economic and social impacts of providing funds for coral reef conservation projects under the CRCGP. The proposed action would include funding grants that included the management, monitoring, ecosystem research, restoration, public education, and capacity building activities identified, and preferably a combination of these activities under each grant. The proposed action is needed to preserve, sustain and restore coral reef ecosystems, to promote wise management and sustainable use, and to educate user groups and stakeholders in appropriate conservation measures for coral reefs of the U.S. and internationally.

This PEA finds that annual implementation of the CRCGP through the work undertaken by grant recipients would not have any significant adverse impacts on coral reef resources. The proposed action will produce environmentally positive benefits as the funds are directed towards activities identified in the Coral Reef Conservation Act and the National Action Strategy, and will help mitigate anthropogenic impacts and potentially reverse the decline of coral reef ecosystems.

All grant applications will be reviewed by the Responsible Program Officer for compliance with NEPA and other environmental requirements through a review of the application and environmental information supplied by grant applicants and other interested parties as stated in the Annual Fiscal Year Funding Guidance. Based on past experience of program implementation and for anticipated future activities and projects, CRCGP grant proposals have at most, minor, temporary immediate or direct negative effects to the environment and are classified as CEs (i.e., certain categories of actions that individually or cumulatively do not have the potential to pose significant impacts on the quality of the human environment). These types of projects are therefore exempted from both further environmental review and requirements to prepare environmental review documents (40 D.F.R. 1508.4, NAO 4.01.c). Such projects can be funded as soon as funds are disbursed to the recipients. Generally, there are no further environmental compliance requirements for these projects and no additional NEPA review is anticipated for these grant awards. Should such review indicate the potential for controversy or



greater environmental impacts beyond what is described in this PEA, then further NEPA review will be implemented.

# 1. INTRODUCTION

This document is a programmatic environmental assessment (PEA) for the United States (U.S.) National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Grants Program (CRCGP). It describes in general terms the planned actions of the CRCGP and potential impacts resulting from those actions.

Because the award of federal funds for the United States (U.S.) NOAA's Coral Reef Conservation Grant Program (CRCGP) sponsored projects is a major federal action, the CRCGP must comply with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality's regulations for implementing NEPA (Title 40 Code of Federal Regulations [CFR] parts 1500 through 1508), and NOAA Administrative Order (NAO) 216-6, which describes NOAA's policies, requirements, and procedures for complying with NEPA and the CEQ regulations. In accordance with these requirements, NOAA, as the lead federal agency, has prepared this PEA in order to assess the potential environmental impacts of: 1) the CRCGP; 2) its annually issued Program Guidelines; and 3) the expected types of projects or grant awards to be funded under the CRCGP.

Consequently, this PEA will be used to streamline the overall CRCGP NEPA review process, thus eliminating duplicative documentation. The PEA will be reviewed every five years in order to ensure that its impact analyses remain current. If not, the PEA will be revised as needed. Additionally, each proposed project will be reviewed in order to determine whether or not its potential environmental impacts have been addressed in this PEA. This review will be conducted by the completion of the NEPA Project Review Checklist contained in Appendix C of this PEA. If this review determines that the proposed project type and its environmental impacts are adequately covered in the PEA, no further NEPA documentation will be completed for that project and the completed Checklist will be included with the other records for that grant award. If the project type or impacts are not adequately covered in this PEA, the proposed project will be the subject of an individual NEPA review. Depending upon the degree of the project's potential impacts, this review could involve either the preparation of a categorical exclusion (CE) memorandum, an environmental assessment (EA), or an environmental impact statement (EIS).

## 1.1 Background

The U.S. Department of Commerce (DOC), NOAA is responsible for implementation of CRCGP, as authorized under section 204 of the Coral Reef Conservation Act of 2000 (Act, 16 U.S.C. 6401, 6403, P.L. 106-562 enacted December 14, 2000, Appendix D).

The stated purposes of the Act are:

- To preserve, sustain and restore the condition of coral reef ecosystems;
- To promote the wise management and sustainable use of coral reef ecosystems to benefit local communities and the Nation;

- To develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems;
- To assist in the preservation of coral reefs by supporting conservation programs, including projects that involve affected local communities and non-governmental organizations;
- To provide financial resources for those programs and projects; and
- To establish a formal mechanism for collecting and allocating monetary donations from the private sector to be used for coral reef conservation projects.

Under section 204 of the Act, the Secretary of Commerce (Secretary) is authorized, through the NOAA Administrator (Administrator), to provide matching financial assistance awards for coral reef conservation projects through the development and implementation of the CRCGP (16 U.S.C. 6403). Section 204(j) of the Act subsequently requires the Administrator to promulgate guidelines for implementing the Program. Section 209 authorizes up to \$8,000,000 for projects under the grant Program in each of the 2001 through 2004 fiscal years. Approximately \$5,000,000 will be distributed under the CRCGP in fiscal year 2005.

## **1.2 Authorized Use of CRCGP Funding**

The CRCGP funds and distributes grants under six categories that include:

1. State and Territory Coral Reef Ecosystem Management (applicants: state and territory management agencies) for conservation and management activities;
2. State and Territory Coral Reef Ecosystem Monitoring (applicants: state and territory management agencies) for ecosystem monitoring and/or assessment activities;
3. Coral Reef Ecosystem Research (applicants: academia, nongovernmental organizations [NGOs], individuals) to develop sound scientific information on the condition of coral reef ecosystems or threats to such ecosystems;
4. General Coral Reef Conservation (applicants: academia, NGO's, local and tribal governments, community organizations, etc.) to implement cooperative coral reef conservation, protection, restoration, research, or education projects that complement or fill gaps in state and territorial government activities;
5. Projects to Improve or Amend Coral Reef Fishery Management Plans (FMPs) (applicants: South Atlantic, Caribbean, Gulf of Mexico, and Western Pacific Fishery Management Council [FMC]s) to obtain information needed to improve or amend FMPs for coral reef species; and
6. International Coral Reef Conservation (applicants: international governments, NGOs) to support coral reef conservation activities outside of the U.S.

## **1.3 CRCGP Grant Process and Process for Programmatic NEPA Compliance**

Each year the CRCGP publishes Annual Fiscal Year Guidance indicating available funds, eligibility criteria, funding categories, and information required of applicants. There are



a wide variety of individuals and organizations that are authorized to apply for specific grants in the various funding categories. Projects are awarded through grants and cooperative agreements, as a funding mechanism to preserve, sustain and restore coral reef ecosystems, promote wise management and sustainable use, develop sound scientific information, and assist in preservation of reefs by supporting conservation programs undertaken by government agencies, NGOs, educational institutions, and community groups. The CRCGP grant process generally includes the following steps:

An announcement of the opportunity for Federal funding is issued, which includes requirements for information pertaining to NEPA compliance.

- Organizations prepare and submit pre-proposals for project grants, which should include enough detail for NOAA to make a NEPA compliance and documentation determination.
- The CRCGP evaluates the applications through a peer-review process and internal NOAA panel, including the information pertaining to NEPA compliance, using a standard evaluation worksheet.
- The CRCGP arrives at a decision on a suite of possible projects to recommend for funding and requests that these applicants submit a revised proposal.
- The CRCGP staff responsible for each of the six grants program categories use a NEPA checklist (see Appendix C) to determine if the project and potential impacts are addressed in this PEA. If so, no further environmental review is conducted other than completion of the NEPA checklist. If the project is not addressed in the PEA, and environmental impact review such as a CE, EA, or EIS will be completed as appropriate.
- The CRCGP staff work with each applicant to prepare the appropriate level of NEPA documentation (CE, EA, or EIS, as appropriate), if they have an application that falls outside of the PEA.
- Each award may have Special Award Conditions (SACs) that the CRCGP imposes on grantees with respect to environmental compliance.

Once the CRCGP receives all preproposals and the deadline for submission of applications has expired, the CRCGP evaluates each application using an independent merit-based review process and an internal NOAA CRCGP panel using a project proposal evaluation worksheet. The worksheet helps score each application against a set of standard criteria, including importance and applicability of the proposal, technical and scientific merit, overall qualifications of the applicants, project costs, and education and outreach. The worksheet corresponds closely with the announcement of the opportunity for Federal funding and has a specific reference under the section pertaining to technical and scientific merit that allows the CRCGP to evaluate the adequacy of the information submitted to ensure NEPA compliance.

The CRCGP decides on a suite of projects to recommend for funding, based on the evaluation scores generated by the project proposal evaluation worksheets. The approval of the CRCGP awards and the disbursement of funds are federal activities subject to authorities such as the NEPA, Endangered Species Act, federal consistency provisions of



the Coastal Zone Management Act, the Essential Fish Habitat (EFH) provisions of the Sustainable Fisheries Act (SFA), Coastal Barrier Resources Act and other environmental provisions. As the federal funding agency, NOAA is responsible for complying with these authorities before disbursing funds.

The CRCGP then uses the NEPA checklist to serve as a guide in choosing the appropriate NEPA compliance tools and decision document, and examines projects in respect to this PEA. If the impacts of those activities are addressed in this PEA, the CRCGP can document those findings in the NEPA checklist. After a thorough vetting including review by NOAA's Office of General Counsel, a determination is made that the grant activities fall under the provisions of this PEA or require further environmental review. If the impacts of those activities, or a portion thereof, are not adequately addressed in the PEA, the applicant and the CRCGP would conduct the appropriate NEPA analyses and documentation using this document and the PEA as cornerstones for compliance. Such NEPA analyses could include the use of a CE, preparation of an EA, adoption of an EA completed by another Federal agency, or preparation of an EIS. As of February 2005, no grant awards have been determined to be other than CE's and merited no further environmental review or mitigation strategy.

NOAA began the CRCGP in 2002 to: 1) improve the understanding of coral reef ecosystems and natural and anthropogenic processes that determine their health and viability; and 2) quickly reduce the adverse impacts of human activities on coral reef ecosystems. In fiscal year (FY) 2002, the Program awarded \$5,482,021 in grants; of this amount, NOAA contributed \$5,132,021, and the Department of the Interior, Office of Insular Affairs (DOI/OIA) provided \$350,000 to support State and Territory Coral Reef Management grants. In FY 2003, NOAA awarded \$4,636,719, and DOI/OIA again provided \$350,000, for a total of \$4,986,719. In FY 2004, awards totaled \$4,951,566 with \$2,388,582 in non-Federal match (See summary Table 1). The program anticipates awarding 44 grants during FY 2005, ranging from \$16,000 to \$525,000, and that funding of up to \$4,851,231 would be available for coral reef conservation projects. The CRCGP has historically awarded the following past grants:

- FY 2004: 50 awards ranging from \$15,000 to \$525,000 for a total of \$4,951,566 million
- FY 2003: 46 awards ranging from \$10,000 to \$750,000 for a total of \$4,636,719 million
- FY 2002: 43 awards ranging from \$23,420 to \$750,000 for a total of \$5,132,021 million

**Table 1: Summary of Federal and Non-Federal Program Funding for FY2002-FY2004**

	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>
<b>NOAA/DOC Funds</b>	\$5,131,671	\$4,636,369	\$4,951,216
<b>DOI/OIA Funds</b>	\$ 350,000	\$ 350,000	\$ 350,000
<b>Non-Federal Match</b>	\$1,831,727	\$1,601,244	\$2,388,582
<b>Total</b>	\$7,313,398	\$6,587,613	\$7,669,798

To date, all grant awards have been reviewed for compliance with NEPA and other environmental requirements and standards and there has been no indication of significant adverse impacts associated with implementation. Therefore, a more generic and programmatic assessment is being conducted to determine whether a Finding of No Significant Impact is justified for this particular program and for typically funded projects. This will allow for a more streamlined grant program that facilitates the dispersion of funding for the intended purposes of the CRCGP in the most expeditious manner consistent with the emergency to which the program is responding.

#### **1.4 Federal Involvement**

The CRCGP is administered through two Federal agencies including the U.S. Department of Commerce (DOC)/NOAA and its line offices, and the DOI/OIA that deal with U.S. Trust Territories and Freely Associated States.

##### **1.4.1 NOAA Line Office Activities**

###### National Ocean Service

The National Ocean Service (NOS) works to further understanding of coral reef systems through coral mapping, monitoring and research activities. NOS scientists study the most effective management techniques and initiate education efforts. Offices in NOS that participate in the funding and management of the grants include: a) Office of Ocean and Coastal Resource Management (OCRM); b) National Centers for Coastal Ocean Science (NCCOS); c) Office of Response and Restoration (ORR); and d) International Affairs Office (IAO).

###### Oceanic and Atmospheric Research

The Office of Oceanic and Atmospheric Research (OAR) works to increase the understanding of coral reef ecosystems by conducting high-quality, peer-reviewed research, developing and implementing sophisticated and extensive coral reef monitoring networks, initiating and implementing outreach and education efforts, and facilitating professional dialogue between coral reef experts. Grants are provided through NOAA's Undersea Research Program (NURP).

###### National Marine Fisheries Service

The National Marine Fisheries Service (NMFS) works to reduce and control the effects of overfishing, coral damage and marine pollution, and leads efforts to map and monitor U.S. coral reefs. Grants are provided through the Habitat Conservation Office (HC).



## 1.4.2 Department of the Interior

### Office of Insular Affairs

The OIA provides technical and financial assistance to support management and protection of coral reefs in the U.S. Virgin Islands and the Pacific islands of Guam, American Samoa and the Commonwealth of the Northern Mariana Islands (CNMI). (DOI/OIA jointly administers grants under the State and Territory Coral Reef Management category to the Commonwealth of Northern Mariana Islands, Guam, and American Samoa.)

## 1.5 Purpose and Need for Action

The purpose of the proposed action is to support local and national partnerships with resource management agencies, educational institutions, non-government organizations and community groups through which coral reef conservation actions are realized. NOAA recognizes the significant role that coral reef user groups and resource management agencies play in coral reef conservation and management and acknowledges the importance of local and regional efforts in protecting coral reefs. These project types are successful because they have significant support of resource management agencies in federal, state and territorial waters within the jurisdictions that have coral reefs, as well as support of stakeholders and community groups, and often depend upon involvement and participation of all user groups and management entities for successful implementation of conservation actions. NOAA is interested in strengthening the development and implementation of technically sound coral reef conservation projects. NOAA anticipates maintaining the current focus of the CRCGP by continuing to support local, regional and national efforts to develop stewardship and a conservation ethic for the nation's coral reef resources

For more than a decade, scientists, policy makers, and national leaders have been expressing a growing concern over the deterioration of coral reef ecosystems. The Coral Reef Conservation Act of 2000 set in motion a program to help address the concerns expressed and widely recognized as real and serious in nature. Substantial funding has been annually appropriated to implement a program designed to improve scientific understanding and taking measures to afford greater protection to these fragile ecosystems. It is the environmental consequences of the federal activities associated with the implementation of the Act that require review.

### *State of the Reefs - The Need for Immediate Action*

Coral reef ecosystems are in serious jeopardy, primarily due to the impacts of a variety of human activities and natural events. Coral reefs are threatened by:

- Over-exploitation and destructive fishing practices;
- Pollution and sedimentation associated with coastal development, deforestation, and agriculture;



- Habitat loss from dredging and shoreline modification;
- Vessel groundings and other direct physical impacts;
- Invasive species, disease outbreaks, and other impacts associated with climate change such as coral bleaching, increased storm frequency and changing sea level.

By some estimates, 27 percent of the world's reefs have effectively been lost, with 16 percent attributed to the massive climate-related coral bleaching event of 1998 and 11 percent lost due to human impacts (Wilkinson, 2000). The rapid decline and loss of these valuable marine ecosystems have significant social, economic, and environmental consequences in the U.S. and around the world.

Because of the large amount of degradation which has occurred and is projected to occur in the absence of concerted action, the International Coral Reef Initiative (ICRI) was launched in 1994 as a partnership among governments, non-governmental and international organizations, multilateral development banks and private sector interests aimed towards conservation, sustainable use and effective management of coral reefs and related ecosystems (include seagrass beds and mangrove forests). The United States served as the First Secretariat for ICRI and helped develop a Call to Action and a Framework for Action that encouraged participants to reduce threats from human-related impacts through: 1) improved and sustained management practices; 2) increased national and local capacities for coral reef ecosystem management; 3) increased political support for managing coral reef ecosystem; and 4) the sharing of existing important and new information related to maintaining the health of coral reef ecosystems. The following measures were endorsed to accomplish these goals:

#### Coastal Management

- Incorporate integrated coastal management measures into local, national, and regional coastal development plans and projects, and support their long-term implementation. These measures will serve as the framework for achieving the sustainable use of, and maintaining the health of, coral reefs and associated environments.
- Develop coral reef initiatives (regional, national and/or local). These should use an ecosystem-based, integrated approach that encourages participation and includes programs for community-based management or co-management of reef resources.

#### Capacity Building

- Establish regional networks to share knowledge, skills, and information.
- Develop and support educational and informational programs aimed at reducing adverse impacts of human activities.
- Establish information exchanges with stakeholder communities.
- Improve developing nations' access to bilateral, multilateral, and other forms of financial and technical support for coral reef management.

## Research and Monitoring

- Use regional networks to achieve better coordination and cooperation among national research programs.
- Promote linkages between regional and global research and monitoring networks, such as Caribbean Coastal Marine Productivity, Pacific Coastal Marine Productivity, and Global Ocean Observing System.
- Support research and monitoring programs, projects, or activities identified as essential to managing coral reef ecosystems for the benefit of humankind.
- Promote the development and maintenance of a global coral reef monitoring network. (ICRI "Call to Action," 1995)

In response, many countries have developed national initiatives based on making improvements to science, management, research and monitoring.

The U.S. is one of many nations around the world working to halt the coral reef crisis and protect, restore, and promote the sustainable use of coral reef ecosystems through the U.S. Coral Reef Task Force (USCRTF) (<http://www.coralreef.gov/taskforce/indx.html>). The USCRTF was established in June 1998 through Executive Order #13089 on Coral Reef Protection to lead the U.S. response to this growing global environmental crisis. The USCRTF is responsible for overseeing implementation of the Executive Order, and developing and implementing coordinated efforts to: 1) map and monitor U.S. coral reefs; 2) research the causes and solutions to coral reef degradation; 3) reduce and mitigate coral reef degradation from pollution, overfishing and other causes; and 4) implement strategies to promote conservation and sustainable use of coral reefs internationally. The USCRTF includes leaders of twelve federal agencies, seven U.S. states and territories, and three freely associated states. The USCRTF has been instrumental in building partnerships and strategies for on-the-ground action to conserve coral reefs and guides and supports activities under the U.S. Coral Reef Initiative (USCRI). The Task Force works in cooperation to support national and local action strategies and plans with State, territorial, commonwealth, and local government agencies, NGOs, the scientific community, and commercial interests.

From mapping and monitoring to managing reef resources and removing harmful debris, the NOAA Coral Reef Conservation Program (CRCP) addresses the priorities laid out in both the National Action Plan (<http://www.coralreef.gov/taskforce/nap.html>) to Conserve Coral Reefs and the National Coral Reef Action Strategy (<http://coris.noaa.gov/activities/actionstrategy/actionstrategy.html#1>). The CRCP supports effective management and sound science to preserve, sustain and restore valuable coral reef ecosystems to help fulfill NOAA's requirements under a number of mandates, including the Coral Reef Conservation Act of 2000. The CRCP also serves as the Secretariat for the USCRTF. NOAA and the DOI serve as co-chairs of the USCRTF.

Table 2 (Turgeon, et. al., 2002), which was prepared by the USCRTF in their National Action Plan to Conserve Coral Reefs, summarizes the problems and the degree of



concern experts have attributed to the natural and anthropogenic pressures on coral reef ecosystems. This represents a considerable effort by the USCRTF to identify the problem areas that need to be addressed.

**Table 2: Ranking of Major Threats to Coral Reef Ecosystems By Region**

This table is a general summary of the relative impact (H = high, M = medium, L = low) of natural and human-related threats to United States and international coral reefs by region. Rankings were provided by scientists, managers, and representatives of the United States Coral Reef Task Force for use in this document. The actual impacts of each threat will vary within and between regions depending on conditions, location, and other factors.

THREATS	REGIONS													
	Atlantic/Caribbean				Polynesia				Micronesia					
	Florida	Puerto Rico	USVI	Flower Gardens	Main HI Islands	Northwestern HI	American Samoa	Guam	No. Mariana Islands	Fed. States of Micronesia	Marshall Islands	Palau	US Remote Insular Reefs	International Coral Reefs
Global warming and bleaching	H	M	M	L	L	L	M	L	M	M	H	H	M	H
Diseases	H	H	H	L	L	L	L	L	L	L	L	L	L	M
Tropical Storms	M	L	H	L	L	L	M	M	M	L	M	L	L	L
Coastal Developmt & Runoff	H	H	H	L	H	L	H	H	H	H	M	H	L	H
Coastal Pollution	H	H	H	L	H	L	H	H	H	M	L	H	L	H
Tourism and Recreation	M	M	M	L	H	M	L	M	M	L	L	M	L	M
Fishing	H	H	H	L	H	M	H	M	M	H	M	M	M	H
Trade in coral & live reef species	M	H	L	L	H	M	M	L	L	L	H	L	L	H
Ships, boats & grounding	H	M	H	M	H	H	M	M	M	H	L	M	M	M
Marine Debris	M	M	L	L	M	H	L	L	M	H	L	M	M	M
Alien species	M	L	L	M	H	H	M	L	L	L	H	M	M	M
Security Training Activities	L	H	L	L	M	L	L	L	H	L	L	L	L	L
Offshore Oil and Gas Exploration	L	L	L	M	L	L	L	L	L	L	L	L	L	M



Action is needed on a wide variety of fronts to address the coral reef crisis, especially on issues of global proportions such as the impacts of bleaching, increasing coastal development, and persistent overfishing of reef systems. The CRCGP serves as one means to address this crisis.

## **1.6 Guidelines, Projects and Review Requirements**

This EA addresses NEPA compliance at two levels: 1) overall program implementation; and 2) issuance of future financial assistance through grant awards. It covers two sets of actions: guidelines to implement the program; and issuance of financial assistance awards for the six major types of projects selected for funding under the program.

### **1.6.1 Issuance of Program Guidelines**

In developing the CRCGP, NOAA used several existing grant programs and mechanisms within the agency to meet the various geographic, project, and applicant eligibility criteria established in the Act. NOAA consulted with the various entities identified in section 204(j) of the Act, and subsequently developed the Proposed Coral Reef Conservation Grant Program Implementation Guidelines (Proposed Guidelines) for Fiscal Years 2002 through 2004 (16 U.S.C. 6403(j)). The Proposed Guidelines were published in the Federal Register for public review and comment on December 10, 2001. The final Coral Reef Conservation Grant Program Implementation Guidelines (Guidelines, see Appendix E for pertinent parts) were published in the Federal Register on April 19, 2002 (67 FR 19396).

The Guidelines are intended to provide a general framework, in accordance with the Act, on Program elements including applicant and activity eligibility, the application process, and the proposal review process. The Guidelines stipulate that Federal funds for any coral conservation project funded under the Program not exceed 50 percent of the total costs of the project. The Act authorizes the Secretary to waive all or part of the matching requirement if the Administrator determines that the project meets the following two requirements (16 U.S.C. 6403(b)(2)):

1. No reasonable means are available through which an applicant can meet the matching requirement, and
2. The probable benefit of such project outweighs the public interest in such matching requirement.

In accordance with 48 U.S.C. 1469a(d), the Guidelines also specify that the Program may waive any requirement for local matching funds for any project under \$200,000 (including in-kind contributions) to the governments of Insular Areas, defined as the jurisdictions of the U.S. Virgin Islands, Guam, American Samoa, and CNMI. In most cases, the match requirement has been waived as a result of severe budget constraints facing the U.S. Territories.

To implement the Program, the Guidelines establish that NOAA will publish in the Federal Register annual funding guidance soliciting project proposals pursuant to the Guidelines. Each fiscal year, beginning with 2002, NOAA has published Coral Reef Conservation Grant Program Funding Guidance (Guidance) to solicit proposals for coral reef conservation activities, subject to the availability of funds.

The Coral Reef Conservation Grant Program FY 2002 Funding Guidance was published in the Federal Register on April 19, 2002 (67 FR 19403), and the Coral Reef Conservation Grant Program FY 2003 Funding Guidance was published in the Federal Register on January 17, 2003 (68 FR 2513). Both Federal Register Notices included specific information for each program category on eligibility criteria, funding availability, proposal submittal and selection dates, and detailed application requirements and application evaluation criteria. These criteria, along with each year's Congressional funding appropriation, guide NOAA in determining the specific projects that are awarded grants of financial assistance. Priorities for funding may change annually.

## **2. PROPOSED ACTIONS AND ALTERNATIVES**

The Federal actions being reviewed include the CRCGP, its guidelines, and approval of annual financial awards for all types of CRCGP proposals submitted by various applicants. The CRCGP is mandated by law and funded on an annual basis for the purposes authorized by the law. Reasonable alternatives consist of: (1) awarding grant funds to a variety of groups for the purposes authorized by the law based on competition, priority of need and compliance with guidance identified in the Federal Register; (2) no-action; and (3) conditional approval of awards that do not immediately meet all of the requirements.

### **2.1 Proposed Action/Preferred Alternative - Approve CRCGP financial assistance awards that include a mix activities that meet national program goals and requirements.**

NOAA's preferred alternative is to award grant funds to various groups involving one or more of the following categories of activities: 1) State and territory management; 2) State and territory monitoring; 3) Ecosystem research; 4) General coral reef conservation; 5) Projects to develop, improve or amend FMPs; and 6) international coral reef conservation. Each of these activities is described in more detail below. Under this alternative, several project types could be implemented under one local project. For example, a project to improve or amend FMPs could include reef fish monitoring, characterization of habitat utilization patterns, mapping benthic environments, stakeholder meetings and workshops, and developing outreach materials. The six categories are complementary in nature, and the preferred alternative would allow different groups to carry out work under each category as part of a comprehensive reef management plan. These projects are designed to complement ongoing state and territorial activities. They have been identified as a priority by the local and national resource management agencies in the jurisdiction where the work will occur. By supporting multiple partners from multidisciplinary fields of work, the preferred



alternative taps into expertise that may not be readily available within the respective government agency. Some of the activities between the different categories are similar, such as monitoring, and the specifics are described in Table 5. For example, monitoring may be conducted through a state and territorial monitoring grant as well as a General Coral Reef Conservation grant, but the activities will fill specific gaps (e.g., each involves a different aspect of the community or occur in other locations than ongoing monitoring programs). The various project types described in Table 5 would be combined in various manners to best serve the needs of the resource management agencies, local communities and user groups, and coral reef ecosystems.

### **2.1.1 State and Territory Management**

The State and Territory Coral Reef Management grants will support comprehensive programs for the conservation and management of coral reefs and associated fisheries in the U.S. jurisdictions of Puerto Rico, the U.S. Virgin Islands, Florida, Hawaii, Guam, CNMI, and American Samoa. NOAA and DOI's OIA jointly administer the grants made under this program to the CNMI, Guam, and American Samoa.

Projects supported under this Program must address the following nine key threat management categories, which are based on threat and management analyses that were completed by the States and Territories:

1. Climate change, coral bleaching, diseases and extreme biotic and storm events;
2. Overfishing, destructive fishing, and the harvest and collection of marine ornamentals;
3. Increasing development pressure, unmanaged land use, and population growth;
4. Tourism and recreational overuse, and vessel groundings and anchorings;
5. Alien and invasive species;
6. Marine pollution, sedimentation, runoff, non-point source pollution, and marine debris;
7. Lack of public awareness;
8. National security activities; and
9. Activities that address other threats.

### **2.1.2 State and Territory Monitoring**

NOAA and its partners designed and are implementing a nationally coordinated, comprehensive, long-term program to monitor and predict the condition of U.S. coral reef ecosystems. The objective of the projects is to achieve the capability to effectively monitor coral reefs and associated communities under its jurisdiction utilizing appropriate and comprehensive methodologies. This long-term monitoring program was requested by the USCRTF, which, along with the nation's coral reef program managers and the public, endorsed and called for implementation of "A National Program to Assess, Inventory, and Monitor U.S. Coral Reef Ecosystems." NOAA began implementing the Monitoring Program in 2000 and continues to administer it through Congressional



appropriations for coral reef conservation. This program is administered by NOAA's NCCOS, as part of the NOAA CRCP.

The Monitoring Program includes the collection, analysis, and reporting of long-term coral reef ecosystem monitoring data pursuant to scientifically valid methodologies and protocols and is a key priority of the National Coral Reef Action Strategy. The implementation plan calls for integrating now-disparate monitoring sites into a coordinated national network, sharing monitoring information among U.S. coral reef resource managers and scientists, and filling gaps in monitoring coverage nationwide. Through this program, U.S. Federal, state, commonwealth, and territorial agencies support a variety of local and regional assessments, inventories, and monitoring of U.S. coral reef resources. Additionally, grantees are encouraged to collaborate with Federal, State/Territory, and academic partners to develop a biennial report describing the status of ecosystems in their region. Regional reports are then combined into a comprehensive assessment of the state of coral reef ecosystems of the United States and Pacific Freely Associated States. The report is available at [www.nccos.noaa.gov/publications/notables.html](http://www.nccos.noaa.gov/publications/notables.html).

The authorized agencies are responsible for the management of near shore and coral reef areas within state as well as international waters. Projects are awarded to:

- Conduct benthic and fish monitoring at coral sites in and around coastal waters by small motorboats or kayaks;
- Initiate or complete benthic characterizations of monitoring sites;
- Conduct fish and invertebrate surveys at all sites;
- Incorporate coral disease and bleaching components into monitoring protocol;
- Evaluate impacts associated with the collection of aquarium fishes and invertebrates; and
- Evaluate effectiveness of protected areas (Fish Replenishment Areas) in increasing fishery stocks.

### **2.1.3 Ecosystem Research**

The Coral Reef Ecosystem Research grants program addresses priority information needs as identified by coral reef ecosystem managers and scientists. Coral reef research priorities supported through this program include research to help address overfishing, pollution, coral disease and bleaching, invasive species, and the impact of these stressors on coral reef ecosystems; fisheries population dynamics and ecology, coral reef restoration and mitigation approaches, effects of anthropogenic stressors on benthic invertebrates, impacts and spread of invasive species, and evaluation of management actions and strategies. Research activities supported under this program are divided into three geographic regions: (1) the Southeastern U.S., Florida, and the Gulf of Mexico; (2) the U.S. Caribbean; and (3) Hawaii and the Western Pacific. In fiscal year 2002, this program was administered by NOAA's NCCOS. Since fiscal year 2003, this program has been administered by NOAA's NURP, as part of the NOAA CRCP.

Projects supported under this program are conducted by institutions of higher education, non-profit organizations, and state, local, and Indian tribal governments. Types of projects have included:

1. Identifying the ecological impact of invasive species.
2. Evaluating the effectiveness of management techniques, such as marine protected areas, on abundance and distribution of marine organisms.
3. Identifying the factors affecting recruitment and survival of marine species.
4. Identifying triggering mechanisms and causative agents, and/or processes that result in declines of coral abundance, coverage, and species richness.
5. Efforts to address overfishing, pollution, invasive species, coral disease and bleaching, and the impacts of these stressors on coral reef ecosystems.
6. Identifying genetic connections between different coral populations.

#### **2.1.4 General Coral Reef Conservation**

The General CRCGP supports projects in the U.S. states and territories and Freely Associated States that are conducted by institutions of higher education, non-profit organizations, commercial organizations, state, local and Native American tribal governments, and natural resource management authorities. The grantee must demonstrate expertise in coral reef ecosystems, jurisdiction over coral reefs, or their activities must directly or indirectly affect coral reefs. NOAA Fisheries Office of Habitat Conservation manages the program.

The objective of the program is to support efforts to:

1. Preserve, sustain and restore the condition of coral reef ecosystems;
2. Promote wise management and sustainable use of coral reef resources;
3. Develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems; and
4. Increase public knowledge and awareness of coral reef ecosystems and issues regarding their conservation.

Projects funded to date include tasks in eight categories based on the priorities identified in the National Action Plan to Conserve Coral Reefs and the National Coral Reef Action Strategy. These include:

1. Monitoring and assessment activities by community and non-government groups that complement state and territorial coral reef monitoring;
2. Studies that improve the understanding of coral reef resources, their ecology and processes, and that are necessary to improve management of these ecosystems;
3. Socio-economic and resource valuation studies;



4. Marine protected areas (MPAs) and associated management activities;
5. Coral reef fisheries management needs;
6. Pollution reduction;
7. Coral reef restoration; and
8. Education and outreach.

### **2.1.5 Projects to Approve or Amend Coral Reef Fishery Management Plans**

This program supports activities by the four Regional FMCs (Western Pacific, Gulf of Mexico, South Atlantic, and Caribbean) with responsibility for FMPs that include shallow water coral reefs or fishery resources that depend on these reef ecosystems. The funded activities are coordinated with ongoing NOAA efforts and fishery management initiatives, and State and Territorial coral reef conservation initiatives. Projects are developed through a consultative process with NOAA and State and Territorial agencies and all other relevant local governmental and non-governmental entities involved in coral reef activities.

Specific activities that have been supported through this program include:

1. Identifying, mapping and characterizing EFH, habitat areas of particular concern (HAPC), and spawning populations, especially in areas that are closed to fishing or that merit inclusion in an expanded network of no-take ecological reserves;
2. Monitoring reef fish stocks inside and outside MPAs to evaluate effectiveness of management measures;
3. Developing proposals to reduce overfishing;
4. Identifying adverse effects of fishing and fishing gear;
5. Eliminating destructive and habitat-damaging fishing practices;
6. Assessing adequacy of current fishing regulations;
7. Providing enhanced education and outreach to fishermen;
8. Incorporating ecosystem-scale considerations in FMPs;
9. Conducting targeted research to understand ecosystem effects of fishing; and
10. Reducing the overexploitation of reef organisms for the aquarium trade.

The implementation of FMPs may ultimately result in some social or economic impacts as they are used to help regulate fishing practices to reduce overfishing or the use of improper/damaging practices. Further decisions may be made once a FMP is developed on whether or not to conduct an assessment on the future implementation of the FMP by FMCs. The purpose of these grants is to improve the information base of sound science upon which better management decisions may be made. However, these grants are not to be used to fund the implementation of the FMPs.

### **2.1.6 International Coral Reef Conservation**

The NOAA International Coral Grants Program addresses national priorities in international coral reef conservation. For the past two years, the International Coral Grants Program has focused on building international capacity in the areas of:



monitoring reef condition; implementing coral reef protected areas; and implementing effective watershed management in coral reef areas. For example, it has:

1. Supported biophysical monitoring projects that contributed to the understanding of coral reef status, promoted public awareness, and contributed to local management objectives with emphasis placed on community participation in monitoring programs and communication of results to policy makers;
2. Provided opportunities to develop best management practices for watershed management that could be shared through the White Water to Blue Water Initiative in the Caribbean meeting in 2004;
3. Supported development of highly protected marine reserves in the Wider Caribbean and Southeast Asia to conserve marine biodiversity and support sustainable use, contributing to implementation of regional action plans as identified in the World Commission on Protected Areas (WCPA)-Marine Caribbean Regional Enhancement Plan and the WCPA-Marine Southeast Asia Regional Action Plan;
4. Promoted implementation of socio-economic assessments of MPAs in the Caribbean and South East Asia as part of regional initiatives to develop methodologies to enhance understanding of the impacts of management on coastal communities and enhance public participation; and
5. Supported assessments of MPA management effectiveness at MPA sites as part of a larger global initiative to improve MPA management performance through the testing and implementation of a methodology for conducting management effectiveness evaluations.

Under this alternative, several project types could be implemented under one local project. For example, a project to improve or amend FMPs could include reef fish monitoring, characterization of habitat utilization patterns, mapping benthic environments, stakeholder meetings and workshops, and developing outreach materials.

The six categories are complementary in nature, and the preferred alternative would allow different groups to carry out work under each category as part of a comprehensive reef management plan. These projects are designed to complement ongoing state and territorial activities. They have been identified as a priority by the local and national resource management agencies in the jurisdiction where the work will occur. By supporting multiple partners from multidisciplinary fields of work, the preferred alternative taps into expertise that may not be readily available within the respective government agency. Some of the activities between the different categories are similar, such as monitoring, and the specifics are described in Table 5. For example, monitoring may be conducted through a state and territorial monitoring grant as well as a General Coral Reef Conservation grant, but the activities will fill specific gaps (e.g., each involves a different aspect of the community or occur in other locations than ongoing monitoring programs). The various project types described in Table 5 would be combined in various manners to best serve the needs of the resource management agencies, local communities and user groups, and coral reef ecosystems.

## **2.2 No Action Alternative**

### **2.2.1 General**

The no action alternative, i.e., not providing funds to eligible grant recipients to conduct approved coral reef activities, is possible, especially if there are no annual appropriations. However, since the CRCGP has been developed, and funds are available to implement and support the program, selecting the no action alternative would put NOAA in non-compliance with a Congressionally mandated and supported program, and deny numerous grant recipients (Federal, State, territorial, local governmental entities and foreign governments and important NGOs) the financial, scientific and technical resources needed to protect fragile coral reef ecosystem resources. Impacts of the no action alternative would include:

1. Failure to advance understanding of the problems and challenges facing the increasingly deteriorating reef ecosystems from natural and anthropomorphic impacts;
2. Curtailed application of improved management principles, coordination and communications, education and outreach on coral reefs, leading to increased degradation;
3. Inability to respond to the commitments made by the U.S. under the ICRI or to the USCRI; and
4. Lack of funding for the specially-designated USCRTF, making it difficult to achieve many of the objectives and actions identified in the National Action Plan to Conserve Coral Reef.

One of the more detrimental impacts of the no action alternative would be the lack of a cross-cutting funding program that comprehensively addresses several coral reef restoration and monitoring initiatives. It is unlikely that NOAA would select the no action alternative since the program has been designed through legislation and is supported by Congressional appropriations.

### **2.2.2 Other Programs**

If CRCGP funds are not made available through this program, it is likely that grant recipients would have to continue to search for funding from other sources to carry out this important work as the needs and tasks will remain as necessary actions.

## **2.3 Conditional Recommendation of Specific Projects**

### **2.3.1 General**

Projects that do not meet all the requirements as determined by the NOAA Federal Program Officer according to established criteria identified in this PEA will not be approved unless appropriately modified. If, for some reason, a proposal would have exceptionally negative environmental impacts or not meet certain requirements, the



project would not be approved or funded. Such occasions would be expected to be rare as they go through a selection process to prevent such possibilities.

In some situations a project that offers significant conservation benefits but does not have all of the information on the purpose, scope and environmental requirements, may be tentatively recommended for funding, pending further review and completion of a CE, EA or EIS. This could include projects with authorities under certain environmental provisions, or projects with methodologies that have not been previously used or discussed in this PEA. For these projects, conditions will be applied to plans and proposals that do not meet approved guidelines or the purposes of the CRCGP, with final approval deferred until all requirements are met or the action is disapproved.

Conditional approval is a mechanism whereby an applicant is provided an opportunity to make necessary changes to a plan, a grant application, or to satisfy additional NEPA or other environmental requirements before an action can occur. The award or expenditure under the award may be delayed via a Special Award Condition until the NEPA requirements are satisfied. In these cases, the Federal Program Officer will work with the applicant to complete the appropriate review, and will consult with the appropriate line office (e.g., Office of Protected Species for activities that may impact endangered species) to 1) determine whether the activities have minor non-significant impacts that are allowable; and/or 2) to determine how the project should be modified in order to comply with NEPA requirements. This alternative action is frequently used as both a resource management and a grants management tool. While this may result in delays in the expenditure of funds, the end result is usually full approval after corrections or additional information is provided or actions taken such as acquiring appropriate permits.

The consequences of implementing this alternative action are mostly administrative but can be meaningful if environmental changes are made because of review requirements and conditions required for full compliance.

### **3. AFFECTED ENVIRONMENT**

#### **3.1 General**

A primary objective of the CRCGP is to promote sound science to improve the understanding of coral reef ecosystems and to mitigate threats responsible for the decline of coral reefs. The jurisdiction of the program includes all areas with shallow water coral reef ecosystems within the insular U.S., U.S. territories, Freely Associated States, and other countries, and includes coral reefs, mangroves, seagrass beds and other associated habitats, as well as the benthic invertebrates, algae and fishes that utilize these habitats. The United States has jurisdiction over an estimated 7,607 square miles of coral reefs, not including the Freely Associated States. Thus, the potentially affected environment associated with the proposed action is quite substantial, and includes all coastal habitats in state and territorial waters, plus offshore habitats within the U.S. Exclusive Economic Zone (EEZ), coastal habitats in tropical and subtropical countries outside of the U.S., as well as coastal areas that influence or affect coral reef ecosystems.

The following section describes the physical, biological and social environments of coral reef ecosystems. Each section provides baseline information on the habitat types potentially affected by the proposed action and alternatives. The following resources also are generally described: EFH, endangered species, cultural and historic resources, and socioeconomics.

### **3.1.1 Corals, Coral Reefs, Coral Reef Ecosystems**

Coral reefs consist of consolidated limestone or unconsolidated rubble constructed primarily from the skeletal remains of invertebrates and algae. Living corals and other benthic organisms form a thin veneer that overlies a limestone framework deposited over thousands of years by their ancestors, and solidified by the combined processes of cementing coralline algae, mechanical action of waves, bioerosion from boring sponges and other organisms, and the chemical action of rainwater. Reef building scleractinian corals are the dominant organisms responsible for most of the framework growth, followed by coralline algae on wave exposed reef slopes, and green algae (e.g., *Halimeda*) in back reef and lagoonal depositional zones. Other important organisms contributing sediments to reef structure include mollusks, foraminiferans, and echinoderms.

Coral as defined by the Coral Reef Conservation Act that guides the CRCGP refers to the species of the phylum Cnidaria, including-

1. All species of the orders Antipatharia (black corals), Scleractinia (stony corals), Gorgonacea (horny corals), Stolonifera (organpipe corals and others), Alcyonacea (soft corals), and Coenothecalia (blue coral), of the class Anthozoa; and
2. All species of the order Hydrocorallina (fire corals and hydrocorals) of the class Hydrozoa.

The Cnidaria comprise over 6,000 known species providing diversity, awe, and beauty known the world over. The soft and stony corals are often single organisms but also form colonies capable of producing massive coral reefs (reefs or shoals composed primarily of corals) that provide numerous benefits. A coral reef ecosystem is defined as "coral and other species of reef organisms (including reef plants) associated with coral reefs, and the nonliving environmental factors that directly affect coral reefs, that together function as an ecological unit in nature." The complexity of such a system that is diverse, subject to adverse perturbations when components of the system are disturbed, and subject to potential rebound if perturbations are minimized becomes clear when it is examined.

Coral reefs are generally found between 30°N latitude and 30°S latitude across the globe in what has sometimes been referred to as the "fragile ring of life" (see Figure 1). While deep or cold water corals exist, the focus of the CRCGP has been on the coral reefs and associated life forms found in the "fragile ring."



Coral reefs subject to the CRCGP are found along the Western Atlantic and the continental shelf of the northern Gulf of Mexico, and around Caribbean and Pacific Islands. Western Atlantic and Caribbean shallow-water coral reefs are off the State of Florida, the Commonwealth of Puerto Rico, the Territory of the U.S. Virgin Islands, and the Navassa Island National Wildlife Refuge. Deeper reefs in the Northern Gulf of Mexico and the Western Atlantic are also covered. Shallow-water reefs of the U.S. Pacific islands are extensive and include the Main and Northwestern Hawaiian Islands, the Territories of American Samoa and Guam, CNMI, and seven remote, unincorporated Pacific island areas (Baker, Howland, Jarvis, Johnston, Kingman, Palmyra, and Wake). Also included are the Indo-Pacific reefs around the Freely Associated States (Federated States of Micronesia, Palau, and the Republic of the Marshall Islands) (Turgeon, et. al., 2002).

### **3.1.2 Mangroves and Seagrass Beds**

Of tremendous importance to the function of coral reefs is their proximity to other associated communities such as seagrass beds and mangroves. The term mangrove is used to refer to a group of trees and shrubs that inhabit the coastal intertidal zone in the tropics and subtropics along protected coastlines, including cays, away from the direct action of waves. Mangrove trees have developed special adaptations to survive the variable flooding and salinity conditions imposed by the coastal environment. They act as a buffer between the land and sea, trapping much of the soil and nutrients that runoff from land. Most of the production in mangroves is associated with the microbial community in the sediments, which is responsible for breaking down the organic matter from land and leaves that fall off the trees, and this is largely exported to reef communities where it is utilized as a nutrient source. Mangrove roots also act as nurseries and shelter for a number of coral reef species including juvenile fishes, mollusks and lobsters.

Seagrasses are a type of submerged aquatic vegetation that evolved from terrestrial plants and have become specialized to live in the marine environment. Seagrass beds are generally found in the shallow subtidal zone of the coastal environment, although occasionally they may be exposed to the air during very low tides. The highest diversity of seagrasses is found in the Pacific, with over 30 recognized species. Three dominant seagrass species found in the U.S. Caribbean region are: turtle grass (*Thalassia testudinum*), shoal grass (*Halodule wrightii*), and manatee grass (*Syringodium filiforme*), with four other species being also common. These species of grass can be found alone or mixed, forming small or large seagrass beds. The extent of a seagrass bed depends on factors such as substrate, temperature, water clarity and protection from wave energy. Seagrasses prefer protected areas with clear waters that allow good light penetration.

Seagrass beds provide food, shelter and nurseries for reef-associated fishes and invertebrates, and also play an important role in trapping sediments and excess nutrients from reef communities and land. Seagrass communities harbor a wide range of benthic, demersal and pelagic organisms. This includes permanent residents, which spawn and spend most of their lives in seagrass beds, as well as transient species. Transient species

spend their lives in seagrass beds during their juvenile through adult life cycle, but spawn outside the seagrass beds, or they move between habitats on a daily basis, using seagrass beds for food or shelter. Other transients seek food and shelter in seagrass beds during their juvenile stage, and move to other habitats as sub-adults or adults.

### 3.1.3 Water Quality

Coral reefs thrive in oligotrophic waters that contain low levels of inorganic nutrients. Pollution enters reef ecosystems in many ways, ranging from such specific point-source discharges as sewage pipes and vessels to more diffuse sources such as runoff associated with agriculture, coastal development, road construction, and golf course irrigation. Though excess nutrients are generally a problem, a continuous supply of inorganic nutrients is essential for maintenance of metabolic processes, the proper functioning of reef ecosystems, and the persistence of coral and coralline algae-dominated communities. Many flourishing coral reefs occur in regions subjected to seasonal upwelling or other natural events such as volcanic eruptions that contribute temporary pulses of nutrients. Nutrient fluxes associated with upwelling events, currents, tides and other sources can play an important role in overall productivity of coral reefs. Furthermore, reefs will persist in areas affected by nutrient loading, provided that the herbivores are sufficiently abundant and diverse and are able to control proliferation of macroalgae.

In many locations terrestrial discharge of nutrients and other pollutants to coastal waters has increased considerably from pre-industrial levels, reflecting increases in human activities in the surrounding watershed. Pollution, including eutrophication and sedimentation associated with land based activities, has been associated with the degradation in water quality and coral reef health and diversity (LaPointe et al. 2000). Some of the sources of pollution include improper coastal development, dredging and beach renourishment, land clearing for agriculture, discharge of untreated sewage, industrial waste, agrochemicals, and pharmaceuticals, and chemical and oil spills. Potential impacts to coral reef ecosystems from these stressors include:

- Poisoning of sensitive species;
- Altering species composition and distribution due to smothering and reduced penetration of light;
- Disrupting critical ecological and endocrine functions such as reproduction, coral/zooxanthellae symbiosis, and photosynthesis;
- Impeding the settlement, growth and survival of stony corals and other benthic invertebrates;
- Enhancing the growth of competitive macroalgae and phytoplankton; and
- Increasing the prevalence and virulence of disease-causing pathogens and reducing the resistance and resilience of reef-building corals.



### **3.1.4 Ecological Functions**

Coral reefs and associated mangrove forests and seagrass beds perform important biological, ecological and physical functions. Two of the main outputs of reefs are organic and inorganic carbon production. Reef organisms fix carbon for the production of their skeletons. The resulting skeletal structure provides a substrate for the settlement and attachment of other sessile organisms, as well as topographical relief that serves as habitat for motile fishes and invertebrates. Coral and algal skeletal materials are also broken down into sediments that form beaches and soft bottom habitats, are incorporated into the reef structure, and form an important part of the inorganic carbon pathway. Primary production of organic carbon by symbiotic zooxanthellae, turf algae, macroalgae and coralline algae supports the diverse organisms and complex food webs found on coral reefs. Through grazing and dislodgement, turf algae and frondose algae are maintained in an early stage of ecological succession where rates of photosynthesis and growth are highest. Secondary consumers (predators of herbivorous fishes and invertebrates) further enhance reef productivity by maintaining their prey in high growth phases and by supplying concentrated nutrients to their prey.

Some of the functional roles of coral reefs and associated habitats include:

- Complex, high relief habitat that serve as refuge for motile fish and invertebrates and microhabitats for cryptic fauna and flora;
- Breeding, feeding and nursery habitats for a great variety of marine species;
- Hard substrate for settlement and growth of sessile organisms;
- Global biogeochemical cycles including a storehouse of carbon dioxide;
- High productivity based on sunlight and coral/zooxanthellae symbiosis supports a complex food web;
- Repository of marine biodiversity and potential source of bioactive substances;
- Protection for coastal areas from strong wave action and full impacts of storms; and
- Natural recorders of past climate and environmental variation.

### **3.1.5 Cultural and Historical Values**

U.S. island and coastal communities are intricately connected with the coral reef ecosystems that surround them. Many of the myths, legends and customs of native islanders encompass the surrounding marine environment as crucial components of life. Local coral reef resources provide food for cultural activities, subsistence and revenue through artisanal, recreational, and commercial fisheries. Historically, the native people of the Pacific islands have a strong cultural and economic dependence to the marine environment that surrounds them. For example, traditional Hawaiian fishery management activities centered around strictly enforced social and cultural controls on fishing. These fishery management activities were based on time and area closures to keep fishers from disturbing natural processes (reproduction) and habitat of important food resources. Recently, the State of Hawaii has supported the development of



community-based subsistence fisheries areas in a few communities. These communities have prepared FMPs, which propose to integrate traditional observational methods and modern science techniques, use fishing to restore community values and stewardship, and revitalize a locally sanctioned code of fishing conduct.

### **3.1.6 Socioeconomic and Environmental Justice**

Coral reefs provide economic and environmental services to millions of people through employment, recreation and tourism, shoreline protection, and sources of food, building materials, and pharmaceuticals. The estimated global economic value of coral reef ecosystems is about \$375 billion dollars per year (Costanza et al. 1997). In the year 2000, an estimated 10.5 million people resided in US coastal areas adjacent to shallow water corals reefs and another 45 million tourists visited these reefs (Turgeon et al. 2002). In addition, the annual ex-vessel value of commercial fisheries associated with U.S. coral reefs is estimated at over 137.1 million (NMFS 2001). In southeast Florida, 18 million people participated in reef related activities during 2001, and these reefs are estimated to have an asset value of \$7.6 billion (Johns et al. 2001). In Broward County, Florida recreational fishers, divers and snorkelers that use the natural reef are prepared to pay \$83.6 million per year to maintain their natural reefs, \$55.9 million per year to maintain the existing artificial reefs and \$15.7 million per year to add new artificial reefs (Johns et al. 2001).

In many cases, coral reefs are found in less developed countries and areas, and significant impacts to coral reefs are experienced most by low income and minority populations, particularly populations who may rely in large part on the coral reefs as a subsistence way of life. In these situations, coral reefs can be fundamental to the fabric of local communities, providing a food source, materials, and traditional activities. It is estimated that despite their limited extent, coral reefs may be home to up to 25 percent of the fish catch of developing countries, or 10 percent of the total amount of fish caught globally for human consumption as food. The primary stressors on coral reefs, including increased population, shoreline development, increased sediments in the water, destruction from tourism and divers, ship groundings, inadequate sewage treatment, overfishing, and water quality issues demonstrate the resource use conflicts and the trade-offs between local economies based on subsistence and increasing development and tourism. Often, the terrestrial changes that occur due to development do not translate into improved living conditions for the lower income and minority populations, while at the same time threatening their subsistence lifestyle. The activities funded through the CRCGP will seek ways to alleviate negative impacts to coral reefs, and therefore will positively address these environmental justice issues.

### **3.1.7 Living Marine Resources and Essential Fish Habitat**

A primary mission of NMFS is the stewardship of living marine resources through science-based conservation and management, and the promotion of healthy ecosystems. Living marine resources refer to the organisms that utilize, or otherwise rely upon, marine, estuarine, and riverine (tidal and non-tidal) resources during all or part of their



life cycles. The passage of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) in 1976 and the SFA of 1996 (SFA; reauthorization of the MSFCMA) authorized NMFS to manage fisheries within the 200-mile wide EEZ along the coasts of the U.S. to address human impacts on the marine environment and to prioritize identification and management of EFH.

EFH is defined in the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Under the MSFCMA, EFH must be identified and conserved. Section 303(a)(7) of the Act requires the eight Regional FMCs to identify and describe EFH for each life stage of the managed species within their jurisdiction. Under Section 305(b)(2) of the MSFCMA, Federal agencies are required to consult with the Secretary of Commerce on any action that may adversely affect EFH. If a project falls beyond the scope of this PEA and is thought to cause adverse impacts to EFH, consultation will occur with Office of Habitat Conservation, Habitat Protection division and the appropriate NOAA Fisheries Service Regional Officer - either the Pacific Islands Regional Office or the Southeast Regional Office.

#### Western Pacific FMPs for Bottomfish and Seamount Fisheries Groundfish, Precious Coral Fisheries, Crustacean Fisheries, and Coral Reef Ecosystems

CRCG projects in the Western Pacific off Hawaii, the Northwest Hawaiian Islands, American Samoa, the Territory of Guam, CNMI, and U.S. Pacific Island possessions may be located within areas identified as EFH for species managed by the Western Pacific Fisheries Management Council under the Western Pacific FMP for Bottomfish and Seamount Fisheries Groundfish. This Plan identifies EFH for seven species and life stages that may coincide with CRCGP project areas, including giant trevally, blacktip grouper, sea bass, ambon emperor, blueline snapper, thicklip trevally, and lunartail grouper. Projects in the Western Pacific may also be located within other areas identified as EFH for three species of black coral under the Precious Corals FMP, and two species and life stages of spiny lobster and kona crab under the Crustacean Fisheries FMP. There are 146 coral reef species listed in the Western Pacific Coral Reef FMP.

#### Gulf of Mexico FMPs for Shrimp Fishery, Red Drum Fishery, Reef Fish Fishery, Stone Crab Fishery, Coral and Coral Reefs Fishery, and Spiny Lobster Fishery.

CRCG projects in the Gulf of Mexico may be located within areas identified as EFH for species managed by the Gulf of Mexico FMC under a Generic Amendment for Addressing EFH Requirements in several FMPs. The Shrimp FMP identifies three species and life stages, including brown shrimp, pink shrimp, and white shrimp that may coincide with CRCGP project sites. Projects may be located within other areas identified as EFH for red drum under the Red Drum FMP; 11 species and life stages of reef fish, including grouper, snapper, and triggerfish, under the Reef Fish FMP; stone crab under the Stone Crab FMP; coral and coral reefs under the Coral and Coral Reefs FMP; and spiny lobster under the Spiny Lobster FMP. The CRCGP projects may also occur in



areas identified as EFH under the Secretarial FMP for Tunas, Swordfish and Sharks, including three species of shark: great hammerhead, nurse shark, and blacktip shark.

South Atlantic FMPs for Spiny Lobster Fishery, Shrimp Fishery, Red Drum Fishery, Snapper Grouper Fishery, Coral, Coral Reefs, and Live/Hard Bottom Habitat Fishery.

CRCGP projects off the coasts off east Florida may be located within areas identified as EFH for species managed by the South Atlantic FMC under the Comprehensive Amendment for addressing EFH (October, 1998). CRCGP project areas may coincide with EFH for spiny lobster and its life stages under the Spiny Lobster FMP; with brown, pink, white shrimp, rock shrimp, and royal red shrimp and their life stages under the Shrimp FMP; and within other areas identified as EFH for red drum under the Red Drum FMP; approximately 72 species and life stages in the snapper-grouper complex, including triggerfishes, grunts, snappers, sea basses, and groupers; and coral and coral reefs under the Coral, Coral Reefs, and Live/Hard Bottom Habitat FMP.

U.S. Caribbean FMPs for Shallow Water Reef Fish, Coral and Reef-Associated Plants and Invertebrates, Queen Conch, Spiny Lobster, and Secretarial FMP for Tunas, Sharks, and Swordfish

CRCGP projects in Puerto Rico and the U.S. Virgin Islands may be located within areas identified as EFH for species managed by the Caribbean FMC under a Generic Amendment to four FMPs (October, 1998). The Shallow Water Reef Fish FMP identifies thirteen species of reef fish, including grouper, snapper, grunt, triggerfish, and red hind and their life stages that may exist in CRP project areas. Other species that may inhabit areas that coincide with CRCGP project locations include over 100 species of coral and life stages, including stony corals, sea fans and gorgonians, and over 60 species of plants, including seagrasses, and invertebrates under the Coral and Reef-Associated Plants and Invertebrates FMP; spiny lobster and its life stages under the Spiny Lobster FMP; and queen conch and its life stages under the Queen Conch FMP. Also, CRCGP projects may occur in areas identified as EFH under the Secretarial FMP for Tunas, Swordfish, and Sharks, including three species of shark: great hammerhead, nurse shark, and blacktip shark.

### **3.1.8 Endangered Species Act**

The Endangered Species Act (ESA) provides for the conservation of species that are in danger of extinction throughout all or a significant portion of their range, as well as designation of critical habitat for these species. Considerations and the manner by which the CRCGP evaluates beneficial or adverse impacts to species that are listed as endangered or threatened are presented in Section 4.2.2 of the PEA.

The PEA lists and describes Pacific and Atlantic Ocean species of fish, invertebrates and sea turtles that were listed or are proposed for listing as endangered or threatened as of the release of this report. The endangered and threatened species that are associated with coral reefs are listed in Table 3.



**Table 3: Endangered Species Act List of Endangered or Threatened Species Associated with Coral Reef Ecosystems**

Status	Species Name
<b>Corals</b>	
T	Elkhorn Coral ( <i>Acropora palmata</i> )
T	Staghorn Coral ( <i>Acropora cervicornis</i> )
<b>Mammals</b>	
E	Hawaiian Monk Seal ( <i>Monachus schauinslandi</i> )
E	West Indian Manatee ( <i>Trichechus manatus</i> )
<b>Sea Turtles</b>	
E, T	Green Turtle ( <i>Chelonia mydas</i> )
E	Hawksbill Turtle ( <i>Eretmochelys imbricata</i> )
E	Kemp's Ridley Turtle ( <i>Lepidochelys kempi</i> )
E	Leatherback Sea Turtle ( <i>Dermochelys coriacea</i> )
T	Loggerhead Sea Turtle ( <i>Caretta caretta</i> )
T	Olive Ridley Sea Turtle ( <i>Lepidochelys oliveacea</i> )

In addition to threatened and endangered species, NOAA Fisheries identifies and publishes a list of Species of Concern. Table 4 lists those species of concern that are associated with coral reef ecosystems. These include species potentially at risk and species with identified data deficiencies and uncertainties related to status and threats. This list increases public awareness about a species and stimulates cooperative research efforts to obtain the information necessary to evaluate species status and threats. It also fosters voluntary efforts to conserve the species before listing becomes warranted.

**Table 4: Species of Concern Associated With Coral Reef Ecosystems.**

Common name	Scientific Name	Location
<b>Fish</b>		
Key silverside	<i>Menidia conchorum</i>	Florida Keys
Striped croaker	<i>Bairdiella sanctaeluciae</i>	Atlantic-FL, Antilles and Caribbean from Costa Rica to Guyana
Humphead wrasse	<i>Cheilinus undulatus</i>	Indo-Pacific-Red Sea to the Tuamotus, north to the Ryukyus, east to Wake Islands, south to New Caledonia, throughout Micronesia; includes U.S. territories of Guam and American Samoa
Bumphead parrotfish	<i>Bolbometopon muricatum</i>	Indo-Pacific-Red Sea and East Africa to the Line Islands and Samoa; north to Yaeyama, south to the Great Barrier Reef and New Caledonia; Paulau, Caroline, Mariana in Micronesia; in U.S. it occurs in Guam, American Samoa, CNMI and the Pacific Remote Island Areas (Wake Islands).

Speckled hind	<i>Epinephelus drummondhayi</i>	NC to Gulf of Mexico
Goliath grouper	<i>Epinephelus itajara</i>	NC southward to Gulf of Mexico
Warsaw grouper	<i>Epinephelus nigritus</i>	MA to Gulf of Mexico
Nassau grouper	<i>Epinephelus striatus</i>	NC southward to Gulf of Mexico
<b>Brachiopods</b>		
Inarticulate brachiopod	<i>Lingula reevii</i>	Pacific-Hawaii, only Kaneohe Bay
<b>Anthozoans (corals)</b>		
Hawaiian reef coral	<i>Montipora dilitata</i>	Pacific-Hawaii (Kaneohe Bay, Midway atoll, and Maro Reef).
Ivory bush coral	<i>Oculina varicosa</i>	Atlantic-West Indies, Bermuda, NC, FL, Gulf of Mexico, Caribbean.

#### 4. ENVIRONMENTAL CONSEQUENCES

This section of the PEA presents an evaluation of the anticipated environmental impacts that could result from implementation of each of the program types (categories) described in section 2.0. Due to the variety of activities carried out under each of the programs, general types of activities, methodology and general characteristic impacts are described for each project type. The potential impacts would be applicable to the affected environment described in section 3.0. These impacts would be minor, but they may vary depending on the particular habitat-types and condition of the resources, threats, and existing management measures in place at the local project-level site. For instance, research involving the collection of a species may have no impacts in pristine areas where that species has not been exploited, while the same level of take may have minor impacts if the species had been overfished in other areas. Thus, each project needs to be evaluated on a case-by-case basis taking into consideration the proposed activity, other projects in the area that may result in cumulative impacts, as well as the conditions described above related to the specific site where the work will occur. A qualitative assessment of the level of significance of potential impacts is included, in terms of minor or moderate positive and/or negative short-term and long term impacts. Direct, indirect, and cumulative impacts are defined as follows:

**Direct impacts** are those caused by the proposed action or no action alternative that occur at the same time and place.

**Indirect impacts** are those caused or induced by the proposed action or no action alternative that occur later in time or are removed in distance from the time and location of the proposed action.

**Cumulative impacts** are the impacts on the environment that result from the incremental effect of the proposed action, added to other past, present, or reasonably foreseeable future actions.



When evaluating CRCGP proposals received under one of the six proposed categories, a checklist (Appendix C) is used by responsible program officers in the review of applications to ensure the potential for adverse or cumulative impacts will not occur or would be used to elevate further environmental review of a project.

#### 4.1 General

Section 6403 (g) of the Coral Reef Conservation Act of 2000 provides a list of performance criteria used to approve coral reef grants. These criteria are an indicator of the types of impacts that are created through program implementation. From a programmatic viewpoint, achieving the performance objectives to address the serious management and health concerns over the coral reef ecosystems will result in both short- and long-term positive environmental, social, and economic impacts. The objectives of the criteria include the ability to:

- Implement coral conservation programs, which promote sustainable development and ensure effective, long-term conservation of coral reefs;
- Address the conflicts arising from the use of environments near coral reefs or from the use of corals, species associated with coral reefs, and coral products;
- Enhance compliance with laws that prohibit or regulate the taking of coral products or species associated with coral reefs or regulate the use and management of coral reef ecosystems;
- Develop sound scientific information on the condition of coral reef ecosystems or the threats to such ecosystems, including factors that cause coral disease;
- Promote and assist in implementing cooperative coral reef conservation projects that involve affected local communities, NGOs, or others in the private sector;
- Increase public knowledge and awareness of coral reef ecosystems and issues regarding their long term conservation;
- Map the location and distribution of coral reefs;
- Develop and implement techniques to monitor and assess the status and condition of coral reefs;
- Develop and implement cost-effective methods to restore degraded coral reef ecosystems; or
- Promote ecologically sound navigation and anchorages near coral reefs.

The types of measures called for in numerous conferences and initiatives over the last decade have included measures to improve coral reef resource management uses through enforcement of better laws and regulations to minimize anthropogenic impacts; education and outreach programs so that individuals and communities can make more informed decisions; better science and understanding of the complexities of the reef ecosystem environment; monitoring and assessing the state of the reefs; and conservation projects such as preventing anchor damage. The CRCGP is a complete and comprehensive program supporting the many facets of best management practices. Absence of this type of management would result in even greater deterioration of the "fragile ring of life."

By law, the CRCGP requires the use of methods and procedures necessary to preserve or sustain corals and associated species as diverse, viable, and self-perpetuating coral reef ecosystems, including:

- All activities associated with resource management, such as assessment, conservation, protection, restoration, sustainable use, and management of habitat;
- Mapping;
- Habitat monitoring;
- Assisting in the development of management strategies for MPAs and marine resources consistent with the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) and the MSFCMA (16 U.S.C. 1801 et seq.);
- Law enforcement;
- Conflict resolution initiatives;
- Community outreach and education; and
- Promote safe and ecologically sound navigation.

These general types of activities result in positive environmental impacts (i.e., focusing management attention to reduce the widespread deterioration of coral reef ecosystems).

## **4.2 Impacts of Grant Awards and Activities Supported**

The six categories of the CRCGP fund activities include field work such as monitoring, mapping and ecosystem research, management activities, enforcement, community-based conservation approaches, activities to reduce threats to coral reefs and reef resources, education and outreach, and capacity building through training, workshops, and technical assistance. The positive environmental consequences of the implementation of the CRCGP include enhanced conservation measures intended to protect fragile coral reefs and their ecosystems. Negative consequences, if any, are expected to be minimal with temporary impacts associated with the need to undertake research and studies, monitoring programs, and management techniques such as increased law enforcement to prohibit the taking of coral products.

The cumulative negative impacts associated with multiple grants that are funded within individual jurisdictions are expected to be minimal and insignificant. In some cases individual applicants receive annual funding for various projects that occur in the same location (e.g., State and Territorial Monitoring) however, these activities are non-invasive, do not involve manipulations of the environment, and only have temporary minor impacts while conducting the work (e.g., diver presence temporarily affects behavior of fishes) which disappear once the divers leave the water. In other cases, multiple projects will be funded within one jurisdiction over the life of this CRCGP, but the activities are not carried out in exactly the same location or do not involve the same organisms (e.g., one group may monitor water quality while another monitors fish and benthic communities). If any activities that involve substantial modifications of the environment (e.g., restoration) or manipulations of organisms found in these



environments (e.g., removal of invasive or pest species or reintroduction of missing trophic groups), subsequent activities proposed for these same locations would be analyzed in detail to ensure that they will not affect the success of previous activities or have cumulatively negative impacts in that location.

The cumulative environmental consequences of achieving grant and individual project objectives over the life of the CRCGP will be positive with respect to dealing with anthropogenic impacts to coral on a localized scale, but may not ensure improvements on a jurisdiction-wide, regional or global scale because 1) many threats are of unknown or natural causes outside of management control; 2) most coral reef resources are in state water and implementation of initiatives and recommendations that come out of the grants are at the discretion of the local resource management agency; and 3) reefs are being impacted by multiple stressors and these projects often focus on very specific aspects of one or more of these.

The following sections include 1) discussion of the objectives and impacts of activities funded under each of the six categories; and 2) description of the major project areas and types of activities, along with an indication of the nature of impacts that would be associated with research, monitoring, mapping, and other types of activities. Many of the projects are of an administrative nature (hiring of personnel, education, plan development), while others involve substantive work within the coral reef environments such as conducting research (section 4.4). Appendix A provides examples of specific grants that were funded under each of the six categories by the CRCGP, with a description of the types of activities for each project. Appendix B provides a list of all grants awarded under the CRCGP between 2002-2004 and as well as a comprehensive list of the types of grants, the applicant, location of work and the funding amount. Table 5 describes the major project area and type of activity for activities funded under the six categories. The summary of environmental consequences of these project areas are described in Table 6. A full discussion of the CRCGP and each of the projects funded between FY2002-FY2004 are available in the publicly published document, "Progress Report - The Coral Reef Conservation Grant Program - Report to Congress" available online at: <http://coralreef.noaa.gov>.

#### **4.2.1 State and Territory Coral Reef Management**

The objective of the State and Territory Coral Management category is to support comprehensive programs for the conservation and management of coral reefs and associated fisheries in the jurisdictions of Puerto Rico, the U.S. Virgin Islands (USVI), Florida, Hawaii, Guam, CNMI, and American Samoa. The types of projects supported under this category include efforts to address threats associated with climate change, bleaching, diseases and extreme events, fishing pressure, coastal development, recreational overuse, invasive species, pollution, public awareness, national security issues and other threats. State and territory management projects would cause minor direct and indirect long-term beneficial impacts to coral reef resources. These impacts would result from new management measures and conservation initiatives and include, but are not limited to, actions designed to reduce extractive uses, mitigate erosion and



point source and non-point source runoff, mitigate impacts of climate change, remove alien and invasive species, establish new zoning policies, restore degraded habitats through plantings of mangroves and seagrasses, and protect networks of marine habitats as MPAs. Some efforts may have minor indirect negative socioeconomic impacts. This could include effects on fishing activities such as the types of allowable fishing gear and the spatial and temporal scale and distribution of fishing efforts; redirection of coral reef use patterns through zoning; and modifications to coastal use and development actions.

In fiscal years 2002 and 2003, the State and Territory Coral Reef Management Grant program awarded \$2,085,000, and \$2,100,000, respectively, totaling \$4,185,000, in grant funding to assist local managers in addressing priority management issues. In addition, in fiscal years 2002 and 2003, program Federal funds were matched by non-Federal funds of \$691,524, and \$578,091, respectively, totaling \$1,269,615. Among the seven jurisdictions' priority issues, the need for increasing personnel took precedence, and approximately \$1,452,514 was awarded to fund an average of 16 full time staff positions per year to support local jurisdictions with implementing coral reef management projects. An additional \$356,800 in funding supported 18 part time or temporary positions filled as contractors, consultants, interns, and their project costs.

Other priority management issues supported by these grants in fiscal years 2002 and 2003 included enforcement, public awareness, mapping, and research. Approximately 37 grant projects implemented public awareness programs such as environmental workshops for teachers and managers, implementation of increased public awareness local action strategies, small grants for school marine science programs, and publication of educational materials. Funding for 14 projects was used to enhance compliance with laws that protect coral reefs, including support for additional enforcement staff, legal consultants, and enforcement equipment. As a result of these grant funds, state and territory managers have a greater ability to develop and implement key projects that are required to effectively protect coral reef ecosystems.

Consequently, hiring personnel for management and enforcement, conducting education awareness, etc., are activities that provide no measurable negative environmental impact and do not require any further NEPA review beyond the PEA.

#### **4.2.2 State and Territory Coral Reef Ecosystem Monitoring**

The primary objective of the State and Territory Monitoring category is to develop and implement a national monitoring network that provides information to assist in the characterization, status and trends of benthic habitats, biological community structure and water quality. Monitoring projects are managed by state and territorial resource management agencies within their respective jurisdiction with the monitoring efforts conducted through multi-organizational partnerships (local, regional, Federal, and possibly international) that build local capacity for maintaining long-term monitoring sites.



Long-term monitoring is key to understanding how coral reef ecosystems function and how they change over time in response to natural or anthropogenic forces. Monitoring provides an essential context for designing field research experiments and understanding their results. Monitoring can also play a vital role in guiding and supporting the establishment of complex or potentially controversial management strategies such as no-take ecological reserves, fishing gear restrictions, or habitat restoration, and determining their effectiveness. Monitoring programs assist resource management agencies by tracking trends in coral reef ecosystem health and identifying patterns in their condition before irreparable harm occurs.

Benthic habitat and reef fish monitoring activities are and will be conducted using non-destructive visual and photographic census techniques. All concurrent water quality measurements will be collected using passive gear (e.g., Conductivity/Temperature/Depth meters). Minor short term impacts may be associated with in-water surveying and monitoring techniques (physical presence of divers and establishing transects see Fig. 2 and section 4.4), but when scientific methodologies and protocols are followed, those impacts are temporary and non-significant. Monitoring efforts can also have positive indirect and direct effects by providing scientific information needed to adapt management in response to changing environmental conditions. To date, no environmental impacts that would trigger the need for additional environmental assessment have been documented for surveying and mapping activities.

#### **4.2.3 Coral Reef Ecosystem Research**

The principal objectives of the Coral Reef Ecosystem Research category are to conduct research on overfishing, pollution, coral disease and bleaching, invasive species, and the impact of these stressors on coral reef ecosystems; fisheries population dynamics and ecology; effects of anthropogenic stressors on benthic invertebrates; impacts and spread of invasive species; and evaluation of management actions and strategies. These projects may involve the tagging of organisms, trapping and fishing (e.g., hook and line, trawls and gill nets) and collecting and transplanting corals (including application of fishery chemicals if necessary), placing permanent markers on the bottom, minor manipulations of the environment through introduction of missing species or removal of invasives, and other types of limited take to allow thorough study of a species or the ecosystem. These activities generally involve a relatively small number of individuals and minor short term impacts to the environment. These activities are only carried out if they will not: impact endangered species or have a significant impact on the habitat, ecosystem inhabitants, or social, cultural and environmental aspects of coral reef ecosystems. These research activities contribute to an improved understanding of ecosystem function and health, and may identify possible actions and initiatives that could be undertaken to improve the condition of the ecosystem. However, they only result in a series of recommendations, and the implementation of the recommended actions and initiatives would be undertaken by the appropriate resource management agency, if they deem it worthwhile, and this may result in a separate NEPA evaluation outside of the CRCGP. Section 4.4 describes potential research impacts in more detail.



#### **4.2.4 General Coral Reef Conservation**

The principal objectives of the General Coral Reef Conservation category are to support programs and projects to preserve, sustain and restore the condition of coral reef ecosystems, promote the wise management and sustainable use of coral reef resources, increase public knowledge and awareness of coral reef ecosystems and issues regarding their conservation, and develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems. Institutions of higher education, non-profit organizations, commercial organizations, local and Indian tribal governments, and Freely Associated State Government Agencies conduct these projects in consultation with state and territorial government agencies and NOAA's CRCP.

The types of activities funded by the CRCGP include monitoring and assessment of coral reef resources, research that provides information needed for management, education to user groups, training activities and other types of capacity building, socioeconomic evaluations, activities to reduce land-based sources of pollution, and efforts to mitigate environmental impacts and restore degraded reefs. The only activities in these categories that could produce some short term impacts are restoration and mitigation projects that require in-water presence. These types of projects may include environmental manipulations to restore damaged coral from breakage associated with shipgroundings or other physical impacts, marine debris removal, removal of an invasive species detrimental to the health of a natural ecosystem, such as a foreign algae, or an outbreak or invasion of a harmful predator such as the Crown of Thorns (*Anthracaster* spp.). These types of activities, however, are undertaken only as a managed activity that follows protocols and is approved by the various federal or state/territorial agencies that have authorities and responsibilities associated with the resources to be affected. In addition, these projects are done at a very small scale (e.g., a part of a reef) and are typically experimental in nature. The goal of these projects is to identify techniques that maximize the survival of coral reef resources and minimize environmental impacts (e.g., use of various reattachment techniques and coral fragments of different sizes) with resulting recommendations presented to resource managers for their consideration in future restoration and mitigation efforts. However, after three years experience, no environmental impacts that would trigger the need for additional environmental assessment have been documented for these activities.

#### **4.2.5 Projects to Improve or Amend Coral Reef Fishery Management Plans**

The principal objectives of the Projects to Improve or Amend Coral Reef FMPs category are to support programs and projects by the Regional FMCs to conserve and manage coral reef fisheries by: 1) reducing the adverse impacts of fishing and other extractive uses on coral reefs and associated ecosystems; and 2) incorporating conservation and sustainable management measures into existing or new Federal FMPs. There are ten types of activities that are supported under this category including:

1. Identifying, mapping and characterizing EFH, HAPC, and spawning populations:  
Studies that identify, map and characterize important EFH, HAPC, and spawning



populations in U.S. coral reef ecosystems, assess the condition of the habitat, and determine the spatial extent of fishing induced disturbance, with emphasis on studies associated with coral reef areas that are currently, permanently, or seasonally closed to fishing or that may merit inclusion in an expanded network of no-take ecological reserves. The bulk of the work in this category occurs in federal waters within the EEZ and includes multi-beam or sidescan sonar mapping and characterization of such areas on deeper coral reefs, banks and beds.

2. Monitoring reef fish stocks: Monitoring reef fish stocks in existing no-take marine reserves and reference sites on coral reefs in the Council's jurisdiction to evaluate the effectiveness of reserves. This includes efforts to improve stock analysis of species proposed as candidates for endangered species listing, high value fisheries species, species targeted for the aquarium trade, or other indicator species.
3. Monitoring and evaluating fish stocks, fishing practices and fishing pressure within coral reef ecosystems: This includes collection of information that is needed to reduce overfishing of coral reef resources, including compilation of existing background information on currently unassessed coral reef fishery stocks, targeted assessments of such coral reef fishery stocks for which overfishing is strongly suspected, and improved means of data collection from harvesting activity for both target and non-target species including socioeconomic monitoring of fisheries and reporting and implementing observer programs.
4. Evaluating fishing practices and fishing gear and their impacts on coral reef ecosystems and resources: Studies needed to identify adverse effects of fishing and fishing gear on EFH and identify modifications and alternatives to reduce these effects.
5. Education and outreach efforts targeted towards commercial and recreational fishermen to eliminate destructive and habitat-damaging fishing practices: Studies, workshops, or consultations with fishers needed to identify and eliminate destructive and habitat-damaging fishing practices.
6. Studies to assess the adequacy of current fishing regulations: Studies, workshops, or consultations with fishers needed to assess the adequacy of current fishing regulations and the need for additional gear and anchoring restrictions to reduce habitat damage on coral reefs and other adverse impacts of fishing within the Council's jurisdiction.
7. Education and outreach efforts to recreational and commercial fishers: Enhanced education and outreach to recreational and commercial fishers specifically targeted to reduce the adverse impacts of fishing on coral reef ecosystems.
8. Studies to understand and incorporate ecosystem-scale considerations into coral reef FMPs: This includes research and development of models to improve understanding of larval pathways, trophic interactions between commercially

important species and other coral reef resources and ecosystem impacts associated with fishing, and habitat impacts associated with certain types of fishing gear and practices.

9. Efforts to reduce the overexploitation of reef organisms for the aquarium trade: Studies to understand the status and trends of ornamental coral reef organisms, socioeconomic evaluations of fishermen in the ornamental coral reef trade, educational initiatives targeted at fishermen to certify them in best collection practices, recommendations on management measures to reduce the potential for overexploitation such as seasonal or spatial closures, size and bag limits, and other management measures to address harvest of reef organisms for the aquarium trade.

The types of activities carried out under this category that are related to research on fisheries may have short term minor impacts associated with collection of organisms, tagging and recapture studies, and fishery-independent monitoring. These types of research activities are discussed in more detail in the table below. The bulk of the activities involve the compilation and analysis of existing data on fisheries, including catch, effort, gear types and other fishery-dependent data, as well as education, outreach and consultations with stakeholders, which are expected to have no impacts.

The results of the projects could have longer-term positive environmental benefits, as the information may contribute to improved FMPs, reduction of fishing pressure on certain vulnerable species or in certain areas, and closure of sites to fishing through implementation of MPAs. While these actions may have short term negative socioeconomic implications (e.g., restricting where fishing can occur, lost harvest opportunities, increases in harvest cost), over the long term these actions would have positive net economic benefits, because they would rebuild depleted fisheries species and conserve biodiversity. A 2001 study found that within five years, a network of five small reserves in St Lucia increased adjacent catches of artisanal fishers by 46-90% (depending on the type of gear used). There was no change in the amount of fishing effort, number of fishermen or number of traps set per fisher. The reserves protected coral reef habitats and relatively sedentary fish species, with spillover of fish stocks into adjacent areas that could be fished. (Roberts, et. al., 2001) However, it is not yet fully understood what the biological benefits would be of spillover from MPAs, and how much the benefits outweigh the costs.

The results of the activities funded through these grants are presented to the Councils and NMFS for consideration in future Council efforts to improve or amend FMPs. They could include recommendations for new area closures, seasonal fishing restrictions, or possible designation of EFH or HAPC. However, incorporation of these recommendations into future FMPs would trigger further NEPA review and/or an environmental assessment by the FMC and subsequent review by NMFS Office of Sustainable Fisheries prior to the development of or amendment to an FMP.



#### **4.2.6 International Coral Reef Conservation**

The international grants are usually awarded to universities and NGOs such as The Nature Conservancy, World Wildlife Fund, The Ocean Conservancy, and others as they often are involved with foreign governments in support of sensitive environmental areas. No negative environmental impacts are associated with these types of activities and are activities that normally do not require NEPA review. However, as it is NOAA's policy to consider environmental impacts in foreign territories, all grants for work in non-U.S. sites will continue to be reviewed on an individual basis to ensure there is no U.S. sponsorship of activities in foreign waters that may result in negative environmental impacts.

International activities supported under this category are likely to have no significant impacts because they primarily involve capacity building, monitoring the status of management measures to determine whether they are working (e.g., monitoring the effectiveness of MPAs), and studies to identify possible sites needing additional protection. The only activities that may have short term impacts are efforts to reduce land-based sources of pollution and efforts that support development of no-take MPAs. Pollution mitigation efforts could include activities to reduce run-off from watersheds affecting coral reefs; these actions may require more environmentally conscious development plans. Protected area projects may include benthic habitat and reef fish monitoring activities that use non-destructive visual and photographic census techniques. Minor short term impacts may be associated with in-water surveying and monitoring techniques (physical presence of divers, tagging of organisms, establishing transects and permanent markers, side scan sonar, passive autonomous hydrophones, and acoustic telemetry), but when scientific methodologies and protocols are followed, these impacts are temporary and insignificant. In addition, minor socioeconomic impacts to fishermen may result by prohibiting fishing activities in no-take MPAs. However over the long term, these restrictions are likely to be beneficial, as MPAs will protect fish populations, allowing them to reach a larger size and biomass, thus producing more offspring that will ultimately spill over into areas where fishing can still occur. Over the long term, activities to address land-based sources of pollution may have positive environmental benefits associated with the implementation of the recommendations that come out of these projects.

#### **4.3 Types of Projects Awarded Funding**

Another way to look at the CRCGP grants is to categorize them as types of funded projects and the level of impacts each may generate in a table format (see Tables 5 and 6 below). Appendix A provides examples of the specific types of projects funded under the six categories of the CRCGP.

**Table 5: CRCGP Project Areas and Associated Activities**

<b>Project Area</b>	<b>Type of Activity</b>	<b>S&amp;T Management</b>	<b>S&amp;T Monitoring</b>	<b>Ecosystem Research</b>	<b>General CRC</b>	<b>Projects to Approve or Amend FMP</b>	<b>International</b>
<b>Outreach and Education</b>	Including development of posters, booklets, videos, training materials and signage; training of user groups and stakeholders in approaches to reduce human impacts on coral reefs through best practices; efforts to improve support for marine protected areas; outreach to fishermen and other user groups through community meetings and workshop; installation of outreach signs and kiosks in areas of high visibility, such as fishing coops, ports, dive shops and marinas.	X			X	X	
<b>Community-based conservation</b>	Organizing the community members to assist trained scientists, park rangers and non-government groups to monitor, cooperatively manage, restore and protect local coral reef resources.				X		X
<b>Field monitoring</b>	Baseline assessments and repeated surveying of organisms and environmental parameters over time to understand natural processes, and the effects of human activities on ecological processes. No organisms are collected as part of these monitoring activities. These assessments and surveys provide information on the abundance, diversity, and biomass of species of concern as well as the condition of particular habitats, changes in the environment due to natural and human stresses, and also effects of management actions.		X		X	X	X
<b>Marine protected area management</b>	Identification of potential MPA sites; development of reserve plans and zoning systems; assessment of effectiveness of MPA regulations in protecting biodiversity.	X			X		X
<b>Fisheries Management</b>	Practices and activities of fishermen are monitored to improve fishery management practices and address overexploitation and destructive fishing practices that may be associated with subsistence, recreational, commercial food fish or aquarium fish fisheries. Projects involve fishery dependent and/or fishery independent assessments such as the identification and characterization of fish spawning aggregation; ontogenetic movement patterns and habitat utilizations studies; larval tracking studies; evaluation of the status of fish populations and changes in response to management and protection; compilation and analysis of commercial and recreational fishing records for un-assessed fishery stocks; socioeconomic evaluations; and workshops and consultations with fishers.	X		X	X	X	X
<b>Improving enforcement capabilities</b>	Assessment of threats and needs in enforcement and protection; training of marine enforcement officers; buying/updating enforcement equipment.	X			X		
<b>Restoration</b>	Development and testing of cost effective restoration techniques for areas impacted by ship groundings; removal/control of	X			X	X	



	invasive species; replanting of mangroves and seagrass beds; small-scale re-introductions of keystone species; culturing and transplantation of corals; mitigation efforts, including relocation of corals from sites affected by dredging, port expansion and other coastal modifications; community based involvement in restoration and clean-up activities; removal of derelict fishing gear and other marine debris from coral reefs and Water Quality associated habitats.					
<b>Reduce land-based sources of pollution</b>	Provide technical guidance to reduce land-based sources of pollution; control discharge from known point sources; monitoring of nutrients, terrigenous sediments and pollutants in water and sediments; research on the effects of sediment and nutrients on benthic reef organisms.	X			X	X
<b>Mapping coral reef resources</b>	Remote sensing (aerial and satellite imagery) of shallow reefs; multi-beam or side scan sonar mapping of moderate depth coral reef habitats; groundtruthing and characterization of benthic habitats; development of GIS maps.	X	X		X	X
<b>Socio-economic evaluations</b>	Stakeholder meetings and surveys to characterize user groups, spatial and temporal patterns of use, and effectiveness of management; assessment of market value and non-market value of coral reef resources; workshops to develop alternative income opportunities.	X			X	X
<b>Reduce Physical Impacts to coral reefs</b>	Installation of mooring buoys, channel markers and other navigational aids.	X			X	
<b>Research</b>	Coral health and disease; genetic studies; larval tracking studies; algal ecology studies; fish and invertebrate population studies	X		X		X
<b>Other</b>	Support for staff positions, travel, scholarship programs, administrative support including purchase of office supplies and project-related equipment, review plans, policies and regulations, and workshops, seminars, meetings.	X				X

**Table 6: Summary of Environmental Consequences for the Proposed Project Areas**

Type of Environmental Impact	Duration of Environmental Impact	Level of Significance	Qualifier for Level of Significance
No Effect or Impact Direct Indirect Cumulative	Short-term Or Long-term	Not Significant	Minor Moderate
		Significant	Major Severe

Table 6: Summary of Environmental Consequences of the Proposed Project Areas						
Project Area	Corals, Coral Reefs, Coral Reef Ecosystems	Mangroves and Seagrass beds	Water Quality	Socioeconomic and Environmental Justice	Cultural and Historical	Living Marine Resources and Essential Fish Habitat
Outreach and Education	Indirect long-term beneficial impact	Potential Short term minor impacts depending on activity	Potential Short term minor impacts depending on activity	Indirect long-term beneficial impact	Potential Short term minor impacts depending on activity	Indirect long-term beneficial impact
	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	No impacts
Community-based conservation	Direct short term minor impacts with long-term beneficial impact	Direct short term minor impacts with long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	No Impact	Indirect long-term beneficial impact
Field monitoring	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact



<b>Marine protected area management</b>	Direct long-term beneficial impact	Direct long-term beneficial impact	Indirect long-term beneficial impact	Direct short term impacts with long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact
<b>Fisheries Management</b>	Indirect long-term beneficial impact	Indirect long-term beneficial impact	No Impact	Potential direct short term minor impacts	No Impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact
<b>Improving enforcement capabilities</b>	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	No Impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact	Indirect long-term beneficial impact
<b>Restoration</b>	Direct short term minor impacts with long-term beneficial impact	Direct short term minor impacts with long-term beneficial impact	Direct short term minor impacts with long-term beneficial impact	No Impact	Direct short term minor impacts with long-term beneficial impact	Direct short term minor impacts with long-term beneficial impact	Direct short term minor impacts with long-term beneficial impact
<b>Reduce land-based sources of pollution</b>	Direct short term minor impacts with long-term beneficial impact	Indirect long-term beneficial impact	Direct long-term beneficial impacts	Indirect long-term beneficial impact	Direct long-term beneficial impacts	Indirect long-term beneficial impact	Indirect long-term beneficial impact
<b>Mapping coral reef resources</b>	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
<b>Socio-</b>	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact

<b>economic evaluations</b>									
<b>Reduce Physical Impacts to coral reefs</b>	Direct short term impacts with Indirect long-term beneficial impact	Direct short term impacts with Indirect long-term beneficial impact	Direct short term impacts with Indirect long-term beneficial impact	No Impact	No Impact	No Impact	No Impact	Direct short term impacts with Indirect long-term beneficial impact	Direct short term impacts with Indirect long-term beneficial impact
<b>Research</b>	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact	Direct short term minor impacts with Indirect long-term beneficial impact
<b>Other</b>	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact



#### 4.4 Research Activities

Scientific research conducted within coral reef ecosystems may involve activities that have direct short-term impacts with indirect long-term beneficial impacts. Direct short-term impacts to coral reef ecosystems include the following activities: collecting, capturing, trapping, tagging, human diver observations using transects, observing and collecting organisms using remotely operated vehicles (ROVs) or submersibles, anesthetizing with chemicals, and sometimes the necessity to kill and dissect a species for stomach content, toxin levels, etc. To ensure that the impacts of research activities are minimal, researchers must take precautions that species other than the target species to be studied are not adversely affected and that they use the least invasive methods possible. To assess population dynamics, life history characteristics including growth rates and reproduction, and diet, some types of research include the take of fisheries in areas where species are captured for subsistence or commercial purposes. Non-fishery species (e.g., corals) may also be collected for laboratory studies or field studies including transplantation from one area to another as a component of a restoration project. Research activities may also require permanently marking study sites with stakes, tagging and marking individual corals for long-term observations, capture and tagging of mobile fishes and invertebrates to characterize growth, reproductive status and movement.

Additionally, some activities requiring specialized equipment may have minimal-to-no impacts on the marine environment. This equipment includes, acoustical transmitters and receivers used to track the movement of target species (such as movement into or out of protected areas), and multi-beam and side-scan sonar equipment used for bathymetry and imagery maps. This equipment has been demonstrated to emit a very high frequency, low power signal with a small duty cycle, with short pings that are widely separated. Based on this information, a determination has been made by NOAA Fisheries Office of Protected Resources that such instruments are above the hearing frequency of marine mammals, and thus have no significant impact on marine mammals or other protected species.

All of these activities are described in greater detail below. Prior to recommending a research project for funding, the specific activities would be closely evaluated to:

1) assess potential impacts and ensure that any impacts are of a minor or insignificant nature; 2) determine if they comply with NEPA requirements and are covered in this PEA; and 3) ensure they address other environmental and administrative review requirements and have undergone a review by other line offices as appropriate.

##### 4.4.1 Mapping

Shallow coral reefs in clear water are often surveyed using air or satellite based remote sensing. Deeper reef environments are characterized and mapped using a multibeam bathymetry and backscatter system and/or towed side-scan sonar. Multi beam and side-scan sonar are attached to the research vessel and do not contact the benthos or any of the attached organisms. Ship-based multibeam echosounders collect bathymetry and acoustic imagery in depths of 0 meters to 3000 meters. The echosounder creates a very



high frequency, low power signal with a small duty cycle, in that each ping is very short and individual pings are widely separated. This results in a sum total of a very low amount of energy at a very high pitch, which has been determined to be above the hearing frequency of marine mammals and thus will have no impact on protected species. This activity does not involve any diving or direct contact with the marine environment, and will have no short term or cumulative impacts.

#### **4.4.2 Monitoring Techniques**

Monitoring of water quality involves the collection of seawater samples (1-100s ml) from various depths and locations (e.g., along a transect extending from shore to the outside of the reef), multiple times per year. Samples are analyzed in the lab to characterize nutrients, sediments and pollutants. Sediment traps are often deployed on and around coral reefs near the substrate and various distances above the substrate.

Monitoring of fish, invertebrates and algae includes rapid ecological assessments and more detailed evaluations, depending on the particular protocol used. Monitoring may be conducted by divers towed behind a research vessel, towed or tethered recording equipment (e.g., video cameras, ROV's, still cameras) operated from the vessel, or SCUBA divers and snorkelers. In water techniques (e.g., diver and snorkeler surveys) for motile organisms can include stationary point counts, roving surveys and belt transect surveys. For the first two approaches, the diver hovers above the reef or swims along a predefined path and records the selected species on underwater data sheet; there is no contact made with the reef, benthic substrates or coral reef organisms. The third approach involves the deployment of fiberglass transect tapes either prior to conducting the survey, or while swimming along the selected path, with the tape used solely as a guide to determine the area of examination. The tape causes minimal impacts (e.g., corals will retract their tentacles) and will not injure animals because it is neutrally buoyant.

Monitoring of benthic communities can also be conducted using transect tapes, as well as quadrats and chains. In general, these surveys involve deployment of the transect in a line parallel to or perpendicular to depth gradients, and the organisms of interest are examined in a belt (a predetermined width on either side of the line), directly under the tape, or at certain points along the tape. Quadrats (PVC or hollow aluminum squares of various sizes that may be subdivided into smaller areas by a grid) are laid haphazardly, randomly, or at certain points along a transect, and the organisms are assessed within the quadrat. Chains are generally brass or stainless steel, with very small links (e.g., a few mm to cm width). These are extended along the bottom like a transect tape, but unlike the transect, the chain follows the contour of the reef and the benthic organisms. Of all survey approaches, chains can potentially have the greatest impacts because they may become entangled in branching coral and the shifting of the chain under surge conditions may abrade coral tissue. However, most researchers use small light chains that are carefully deployed and removed from the reef to avoid injury and entanglement.



Monitoring efforts can include random surveys, or repeat examination of the same area. For repeat surveys, researchers often mark the bottom with rebar stakes or permanently affix quadrats to the reef. The rebar and quadrats are typically attached in hard ground, rubble or sediment areas in locations where they will not injure or damage benthic invertebrates. Monitoring involves visual assessments as well as photographic and video documentation.

Prior to approving a monitoring project, activities will be reviewed to ensure that they use approaches that are generally accepted by the coral reef community, they are conducted such that the potential impacts are minimized, and only involve use of materials (e.g., chain transects that are small and light) that will not result in significant environmental impacts.

#### **4.4.3 Tagging**

Fish tagging - Fish are captured with fish traps, hook and line (barbless hooks) or surround and barrier nets, with efforts taken to minimize deployment time and minimize barotraumas (e.g., release of gas trapped in swim bladder due to pressure changes). In general, traps are set for a few hours to a maximum of 24-48 hours to prevent fish from starving or preying upon each other, and nets are deployed for a few hours to avoid entanglement by other non-target species. The captured fish are measured and tagged with minimal exposure to air, and released after resuscitation, generally within a few minutes to avoid post-collection mortality (or they may be held in pens up to 60 minutes to allow for recovery and to examine potential negative impacts associated with tagging). Some mortality may occur, but this varies with species, method of capture, and the life stage (e.g., larval fish exhibit higher rates of mortality), and is typically less than one percent when the fish are properly handled, revived before release, and released within as short a period of time as possible.

Typical tags include: coded wire tags (e.g., external spaghetti tags), elastomer T-bar anchor tags, 8.0 cm serially numbered plastic (nylon) dart identification tags, visible implanted fluorescent elastomer (VIFE) tags, and acoustic transmitters. Coded wire tags are small implants with relatively low levels of biological effect, but are difficult to use for the individual identification in the water, and typically rely on returns from fishermen. VIFE tags are injected between the rays of the caudal fin, similar to a tattoo. Each is comprised of 4 separate lines in differing colors that can be read underwater using a UV light source. These tags are reported to have no impact on the fish.

Projects involving underwater acoustic telemetry equipment to track fish movement patterns involve the use of transmitters that are of a small size for implantation with no effect on the fish; a relatively long battery life; an adequate detection range; and a unique signal to allow differentiation of individuals. One of the most common approaches involves fitting of fishes with internal coded acoustic tags (e.g., V8Sc or V16 tags that are 8-25 mm in size and have a battery life of 2-24 months; one supplier is Vemco, Halifax, Nova Scotia). Tags are inserted into a small incision in the abdominal wall, which is closed using a surgical stapler; fish are bathed in aerated MS-222 (an anesthetic solution



to prevent stress) during the surgery. Laboratory studies suggest that acoustic transmitters placed in the body cavity do not affect the growth and behavior of tagged fish. These transmitters transmit a train of 6 pings (pulses) per cycle at a frequency of 69kHz. The acoustic signal undergoes rapid loss due to absorption properties of the water, requiring the fish to be within 10-20 meters of the receiver to pick up the signal. Because of the low amount of energy emitted by these transmitters, this is not likely to affect any marine mammals or other protected species. Acoustic receivers are placed on the sea floor bottom and suspended 1-2 m above the ocean floor in areas where they will not affect benthic invertebrates or other habitat features, and are removed at the end of the experiment.

Shark Tags - The two principal tags that are in use are a fin tag (Jumbo Rototag) and a dart tag ("M" tag). The rototag is a two-piece, plastic cattle ear type tag, which is inserted through the first dorsal fin using seawater resistant nylon cable tie. NMFS biologists primarily used these tags on small sharks during the first few years of the CSTP. As the Program expanded to include thousands of volunteer fishermen, the dart tag was developed to be easily and safely applied to sharks in the water. The "M" tag is composed of a stainless steel dart head, monofilament line, and a plexiglass capsule containing a vinyl plastic legend with return instructions printed in English, Spanish, French, Japanese and Norwegian. These dart tags, in use since 1965, are implanted in the back musculature near the base of the first dorsal fin. More recently, a Hallprint tag has been used on a limited basis for use on small sharks in the nursery areas.

In addition to various internal and external tags, researchers will frequently chemically mark the otoliths of fishes with inorganic fluorescent substances such as oxytetracycline (oxytetracycline hydrochloride at 75 mg/kg fish body weight), tetracycline, alizarin, and clovein fluorescent green for growth and recapture studies. Oxytetracycline (OTC) belongs to a group of antibiotics used chiefly in treating infections caused by streptococci, staphylococci, Gram-negative bacilli, rickettsiae, and certain protozoans and viruses, and is now the preferred chemical because of its high retention in bony structures. OTC is injected into the coelomic cavity or the fish are bathed in an OTC solution. The use of OTC has been shown to have no effects on the vulnerability of juveniles to predation. Mortality to tagged fish is minimal when used at low concentration like that described above, and the pH is similar to seawater. While no significant mortality has been detected when OTC is used for mass markings (of 1000s of fish), smaller (larval) fishes do experience higher rates of mortality than juveniles and adults. Other chemicals used to tag otoliths, including tetracycline, are associated with higher rates of mortality, and their use in a CRCGP project would not be approved unless the applicant demonstrates that they have conducted previous work to verify that the proposed method is effective and safe, and has minimal impacts on the target species and the environment.

#### **4.4.4 Fishery Chemicals**

Quinaldine is a colorless liquid of a slightly pungent odor, first obtained as a condensation product of aldehyde and aniline. Quinaldine is used in manufacturing oil



soluble dyes, food colorants, pharmaceuticals pH and as an antimalarial compound; it is also routinely used to anesthetize marine vertebrate fishes because it: 1) causes partial or complete loss of sensory awareness; and 2) ability to feel pain and ability to carry out muscle movements, thereby facilitating their capture. Quinaldine has been reported to be an irritant to the gills, and may induce hyperactivity in fishes, but tissue concentrations decrease to undetectable levels within 24 hours (Bowser, 2001).

Quinaldine is used, as an alternative to suction devices, because juveniles are highly cryptic, water is often turbid in sample locations, and adult fishes retreat to crevices within the reef, making it difficult to detect the fish using visual censuses or capture these fishes using nets. It is also preferred over other chemicals, due to dispersal characteristics and its effectiveness in high current environments typical of the sampling sites. Quinaldine sulfate is readily soluble in water and is rapidly diluted by water circulation. Because the duration of the use of quinaldine is short (typically a single application or weekly to monthly applications over six months within small areas), the concentration is low (typically a 10 percent solution is used) and application occurs in high flow environments, the chemical will be rapidly diluted and dispersed and thus will have no long term or cumulative impacts. Quinaldine has been found to be harmless to invertebrates at typical concentrations (10 percent) used for fishery research. In one funded project, a one year pilot study involving several hundred applications of quinaldine was tested to identify potential adverse impacts, and none were observed.

MS-222 (tricaine methanesulfonate) is intended for the temporary immobilization of fish, amphibians, and other aquatic, cold-blooded animals and is generally used at a concentration of 0.1g/l. It has long been recognized as a valuable tool for the proper handling of these animals during manual spawning (fish stripping), weighing, measuring, marking, surgical operations, transport, photography, and research. It is approved by the Food and Drug Administration (FDA) for aquaculture, but it cannot be used for fish destined for human consumption until 21 days after treatment. There have been no reported adverse impacts on the environment.

Clove Oil is a mixture of eugenol, isoeugenol and methyleugenol that has been affirmed as "Generally Recognized as Safe" for addition to foods (21 CFR 184.1257). Isoeugenol and eugenol are also used as flavoring substances in human and animal feed and in dental fillings. The FDA does not currently approve this compound for use as a fish anesthetic and its effects on fish physiology, immune response, or olfactory ability are unknown. It has been shown to be an effective anaesthetic in field trials, although the required dose is highly dependent on the weight of the fish and recovery time was dependent on dose, not fish size. Because the impacts of clove oil are largely unknown, we would request that the applicant conduct a small pilot study to evaluate potential impacts of this anesthetic at different concentrations within the proposed area of work prior to the approval of a project using clove oil.



#### 4.4.5 Collection of Coral Reef Species

Limited sampling of stony corals and other benthic invertebrates may be undertaken for laboratory analysis, coral culturing efforts, transplantation, and to evaluate historical physical and environmental parameters. This includes removal of cores from large massive corals, removal of individual branches, removal of selected portions of a colony, such as an area affected by disease, or the collection of an entire colony or organism.

Large cores (e.g., 10-15 cm diameter X 0.5- 5 m length) are removed from large massive colonies and also from reef environments to assess rates and patterns of reef accretion, the composition or nature of fossil assemblages, coral growth for species with annual banding patterns, and a long term record correlating environmental change with fossil records. Coring requires use of an underwater hydraulic drill, pumps and coring equipment. One standard practice to minimize potential environmental impacts (and to reduce the potential for colony mortality) involves the filling of holes left by coring with Portland cement or clay. Any CRCGP projects that involve coring of corals will not be approved unless the applicant has included methodology for filling the cores that meets these requirements.

Branches or portions of colonies (e.g., fragments, small cores) are collected for disease and health research (e.g., genetic studies, physiology and growth studies, infection experiments, histology) and for use in coral nurseries. For laboratory studies, it has been determined that small cores do not need to be more than 3 cm in diameter (and less, depending on the experiment), with up to 10 cores removed from individual colonies (e.g., 5 from the diseased location and 5 from a remote location) and portions of branches representing no more than 20 percent of the colony need to be collected. Previous studies have shown that corals are able to recover from this level of collection. No CRCGP project proposing the collection of corals for use in laboratory studies would be approved if it represents a larger portion of the colony unless the applicant demonstrates that this will not negatively impact the survival of the coral. Projects that propose to collect corals for use in coral nurseries and coral restoration projects will not be approved unless: 1) the applicant has documented a need for these efforts; and 2) they have identified a location to collect the corals and the volume of coral from this site (e.g., number of branches or individual colonies) that can be removed without having significant negative impacts on the coral population in that area. In general, preference will be given for these type of activities when they include the collection of "fragments of opportunity" which include unattached coral fragments that were generated by a storm or ship grounding and which are likely to die if left alone (e.g., corals that accumulate in sand channels).

Limited collection of fish and motile invertebrates are undertaken to characterize life history stage, fecundity, growth rates, and diet. This includes collection of fishes and invertebrates using hook and line, traps or nets that are measured, tagged and released as well as organisms that may be killed in the process of the research.

Projects involving the collection of whole organisms or parts of colonial organisms will be approved only if the applicant demonstrates that the numbers of individuals are:



1) reasonable and low enough such that they will have no significant impacts on the population of that species; 2) are taken using non-destructive techniques without damaging the environment or causing mortality to non-target species; and 3) do not include species that have undergone a substantial population decline and additional take will negatively affect the persistence of that population. Proposals involving the collection of species protected through other environmental mandates (e.g., threatened or endangered species) will not be approved until the consultation process with the appropriate line office (e.g., Office of Protected Resources for endangered and threatened species) has been completed and that office has determined that the take is allowable and not detrimental. Furthermore, no collection will be allowed unless the applicant has obtained all appropriate permits from the resource management agency responsible for managing that resource (e.g., state or territorial government, NMS, etc.).

## **4.5 Other Types of Projects**

### **4.5.1 Mooring Buoy Installation**

**Recreational moorings:** A variety of mooring systems are commonly used as a means to lessen the harmful effect of anchors on coral reefs and as an aid to coral ecosystem conservation. There are two basic types of mooring anchors - embedment anchors and weighted anchors. Embedment anchors are either embedded into the hard sea floor or are embedded into soft substrate and held in place by the weight of the sand or rubble. These moorings are installed either by drilling and cementing an anchor pin into hard bedrock or by embedding specially designed metal embedment anchors into soft substrates (Manta Ray anchors and Helix anchors are the most commonly used types). Weighted anchors consist of a mooring line that is attached to a heavy object, such as a cement block or heavy metal plate, which sits on the sea floor. CRCGP projects proposing the use of weighted anchors in areas with coral reefs or seagrass beds will not be approved due to the potential for the weights to drag during storm events and damage large areas of coral or seagrasses.

The installation of embedment anchors requires use of an underwater hydraulic drill and pumps, a hydraulic torque motor for setting helix anchors, a hydraulic ram for setting Manta Ray anchors, and cement for setting an eyebolt pin anchor. Mooring downlines consist of a rope, line or metal chain. Although metal chains are stronger than a rope downline, chain can do significant damage to reef areas and will only be approved in areas where potential damage to reefs is not an issue. Standard practices for the selection and installation of mooring buoys are well documented by groups such as the Coral Reef Alliance, PADI Project AWARE, and the FKNMS CRCGP mooring buoy projects will not be approved unless an accepted methodology is followed.

**Storm moorings:** Storm moorings in the form of designated mooring fields are used to secure watercraft during turbulent weather. Mooring fields consist of open link mooring chain laid out in parallel rows and secured to the seabed with hydraulically installed helical embedment anchors. Installation of embedment anchors uses the same methodology as recreational moorings. Since the mooring chains can do significant



damage to reef areas, storm moorings will only be approved in areas where potential damage to reefs is not an issue. Individual mooring lines are attached to the ground chain between the installed helical embedment anchors thereby spreading the load between the anchors. Marker buoys delineate where fore and aft secure shackle attachment points are connected to the ground chains for each boat to attach its individual down lines. Mooring fields are designed to allow sufficient room between boats and clear passageways for boats transiting each area.

**Marker buoys:** Marker buoys are used to designate particular areas of use/nonuse by recreational boats and jet skis, swimming, diving and snorkeling, to demarcate boundaries of preservation areas, and zones in protected areas. Buoys consist of a floating buoy or cylindrical floating pipe that can carry an informational message and are secured in a fashion similar to that used for mooring buoys. Where possible, marker buoys are generally the Helix or weighted anchor type and are placed in sand to avoid the expense and trouble of drilling bedrock.

#### **4.5.2 Signage**

Informational and educational signs are placed in strategic locations to alert and educate the public of important conservation and preservation messages. Signs are placed near streams, in coastal areas or in shallow waters at sites determined to be highly visible by the public and in areas where impact to the surrounding environment is determined to be nonexistent or negligible. Signboards are firmly fastened to a metal post or wood pole which is secured in concrete in the ground or driven with a hammer into the soft bottom substrate.

#### **4.6 Cumulative Impacts**

The CEQ defines cumulative effects as, “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions,” (CEQ, 1997a). Therefore, analyzing cumulative effects is more challenging, primarily because of the difficulty of defining the geographic (spatial) and time (temporal) boundaries of such analyses. The spatial boundaries of the cumulative effects analysis in this PEA are coral reef ecosystems of the United States. The temporal boundaries of the cumulative effects analysis shall be three years into the past and future (2000 to 2008) because the most recent projects are most relevant and the future of program funding can fluctuate.

The impacts caused by the proposed action are, in general, short-term minor impacts related to implementation of specific projects, which then lead to longer-term minor to moderate beneficial impacts on the community, resources, and coral reef ecosystems of the United States. This is consistent with past projects funded by the CRCP. For any project proposed through the CRCP that involves in-water activities, such as monitoring, research and restoration, the Federal Program Officer will evaluate the number and type of other projects that have occurred in the same location and whether the cumulative



negative impacts associated the proposed activity, as a result of previous and ongoing projects, are likely to be significant. If a project is identified that could contribute to significant cumulative impacts, the Program Officer will work with the PI of the project, and other federal agencies or offices to conduct additional NEPA analysis prior to approval of that project. If, after this review, the project is found to have the potential to cause cumulative impacts and it is a priority of the program, the Program Officer will work with the applicant to modify the project such that these impacts are minimized to the extent possible.

#### **4.7 Mitigation Measures**

For any activities that have potential environmental impacts on coral reefs, each project would be carefully reviewed to ensure that appropriate emphasis has been placed on activities to mitigate impacts. Examples of the types of mitigation that would be required are illustrated below:

- Projects involving the sampling of portions of colonies through the removal of one or more cores will only be approved if the researcher has made provisions to fill the core hole with clay or epoxy.
- Projects involving the transplantation of corals from a healthy site to a degraded area will only be approved if the amount of coral removed is minimal, based on best practices that have been recommended by the international community (e.g., no more than 20 percent of a colony is removed; colonies are removed from competitive interactions where they are likely to die or be overgrown instead of the removal of isolated colonies and collection follows other guidelines summarized in Bruckner, 2003).
- Restoration projects involving transplantation of corals or other organisms include: 1) only transplantation of those species that were previously found in the area; 2) are of a similar genetic diversity; 3) are from the localized area and appear healthy to avoid potential introduction of pathogens or parasites (e.g., corals are not transplanted from Puerto Rico to Florida); and 4) are undertaken only if the threat responsible for the decline of the corals has been mitigated in the area where the corals will be transplanted.
- Restoration projects include a scientific hypothesis, experimental design and follow-up monitoring, including monitoring of the control sites where corals were collected from, to ensure the project does not have significant cumulative impacts, and to ensure that lessons learned from the project can be applied to future efforts thereby mitigating their potential for causing significant impacts.
- Projects involving the use of chemicals include a pilot study or evidence from previous research to ensure that the chemical has minimal impact on the target species, associated species or habitat.
- SCUBA divers that will be involved in in-water research and monitoring have proper training in diving, and are capable of exhibiting responsible dive practices (e.g., proper buoyancy) such that they do not injure organisms or cause unnecessary habitat impacts.

- Projects involving implementation of management measures that may have negative socioeconomic implications (e.g., activities that affect the livelihood of user groups), efforts are included to educate the user groups in the need for these measures and assist user groups in identifying alternatives they could pursue to minimize economic burdens.
- Projects involving the use of traps, nets, trawls or other types of fishing gear used to sample fish populations must include measures to ensure that these gear types are not placed or used in locations where they will damage habitats.

## **5. Compliance with Other Environmental and Administrative Review Requirements**

The approval of plans under this program and award of financial assistance are federal activities subject to authorities such as NEPA, Endangered Species Act, and the federal consistency provisions of the CZMA. NOAA is responsible for ensuring that projects comply with these and other relevant authorities. Compliance with these authorities will result in few environmental, social, and economic negative impacts.

### **5.1 National Flood Insurance Program (NFIP)**

The NFIP prohibits the use of funds for acquisition or construction of buildings in special flood hazard areas in communities that are not participating in the Flood Insurance Program, as identified in the NFIP's Community Status Book. Construction of buildings is not an eligible use of CRCGP funds and no impact is anticipated in any floodplains as a result of federal funding.

### **5.2 Coastal Barriers Resource Act (CoBRA)**

In order to receive federal funds, all proposed projects located on undeveloped coastal barrier islands designated in the CoBRA system must be consistent with the purposes of minimizing: the loss of human life; wasteful federal expenditures; and damage to fish, wildlife, and other natural resources. No adverse impacts as a result of implementation of the CRCGP are anticipated or expected to undeveloped barrier islands.

### **5.3 Endangered Species Act**

No funds under the CRCGP will adversely impact any endangered or threatened species listed under the ESA. The entire purpose of the CRCGP is to conduct research, monitoring, finding solutions to problems plaguing the coral reef environments such as invasive species and diseases, better FMPs, and improve scientific knowledge and understanding. The two agencies responsible for enforcement of the ESA, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service are major proponents of the CRCGP and are responsible for issuing many of the grant awards and help to ensure compliance with the ESA and other pertinent laws such as the Convention on International Trade in Endangered Species. Should any activity have the potential to cause temporary adverse impacts to protected species, appropriate consultations between



the granting agency and NOAA's Office of Habitat Conservation will be undertaken to avoid, minimize or offset any adverse impacts associated with the research or monitoring ensuring no long-term or cumulative impacts result from the research.

#### **5.4 Magnuson-Stevens Fishery Conservation and Management Act**

The MSFCMA requires that federal agencies consult with NMFS regarding any action authorized, funded, or undertaken that may adversely affect EFH for federally managed fish. The CRCGP has positive impacts on EFH through funding NMFS FMPs and studies to improve science needed to better understand the important role of EFH. Should any form of manipulative research be undertaken in EFH that has the potential to cause temporary adverse impacts within EFH, appropriate consultations between the granting agency and NOAA Office of Habitat Conservation will be undertaken to avoid, minimize or offset any adverse impacts associated with the research or monitoring ensuring no long-term or cumulative impacts result from the research. Any consultation procedures will follow the procedures outlined at 50 CFR 600.920.

#### **5.5 National Marine Sanctuaries Act Consultation—Section 304(d)**

Under the National Marine Sanctuaries Act, federal agency actions internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary. Each federal agency proposing such an action must provide a written statement describing the action and its potential effects on sanctuary resources no later than 45 days before the final approval of the action. In addition, sanctuary permits may be required for certain actions that would otherwise be prohibited.

#### **5.6 Coastal Zone Management Act (CZMA)**

Under section 307 of the CZMA, coastal states and territories with federally-approved coastal management programs are required to certify that federal activities (including financial assistance projects) are consistent with the enforceable policies of the program. Prior to the CRCGP grants being awarded, all proposals must be certified by the State Coastal Management Agency that the acquisitions are consistent with the policies of the respective coastal management programs.

#### **5.7 National Historic Preservation Act**

Under the provisions of Section 106 of the National Historic Preservation Act of 1966, the Secretary of the Interior has compiled a national register of sites and buildings of significant importance to United States history. The CRCGP will not impact registered sites or buildings on shore or any such submerged site that might alter or deface such a site.

## **5.8 Environmental Justice**

Consistent with the President's Executive Order on Environmental Justice (Feb. 11, 1994) and the DOC's Environmental Justice Strategy, applicants shall ensure that their CRCGP projects will not have disproportionately high and adverse human health or environmental effects on minority or low income populations. Section 3.1.6 above discusses how the CRCGP meets Environmental Justice requirements.

## **5.9 Executive Order 12866**

Implementation of the CRCGP does not constitute a "significant regulatory action" as defined by Executive Order 12866 because: 1) it will not have an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities; 2) it will not create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) it will not materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; and 4) it will not raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

## **5.10 Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements**

The DOC has published in the Federal Register, October 1, 2001 (66 FR 49917), as amended October 30, 2002 (67 FR 66109), a set of requirements that are applicable to all federal financial assistance awards issued by the Department. These will be addressed as SACs on financial assistance awards.

## **5.11 Exempted Fishing Permits**

Under the FMP for Atlantic Tunas, Swordfish, and Sharks, shark regulations govern conservation and management of sharks, solely under the authority of the MSFCMA. Research that involves longlining for sharks or other fishing activities that capture sharks for tagging will require a permit. The NMFS authorizes permits for certain activities, and persons may not conduct these activities without the appropriate permit, unless otherwise authorized by NMFS. In certain cases additional permits may be required to authorize these same or related activities under federal, state or local jurisdictions. An owner issued a shark permit must agree, as a condition of such permit, that the vessel's shark fishing, catch and gear are subject to the requirements of this part during the period of validity of the permit, without regard to whether such fishing occurs in the EEZ, or outside the EEZ, and without regard to where such shark, or gear are possessed, taken, or landed. However, when a vessel fishes within waters of a state that has more restrictive regulations on shark fishing, persons aboard the vessel must abide by the state's more restrictive regulations.



## **a. Marine Mammal Protection Act**

The Marine Mammal Protection Act authorizes NMFS to take measures to protect marine mammals that may involve setting aside habitat required for various life stages, although the chief provision is the prohibition on "taking" marine mammals directly or indirectly. The only type of activities that may affect marine mammals are studies that evaluate the impacts of fishing gear on coral reef habitats. Some gear types currently used in coral reefs may incidentally capture marine mammals (e.g., long lines and gill nets) and projects funded under the CRCGP would be evaluating the potential detrimental effects of these gear types. Hence, the net impact associated with these types of projects is expected to be positive, as they would include recommendations of measures to modify gear types so that they are less likely to capture or entangle marine mammals. However, should any activity have the potential to cause temporary adverse impacts to marine mammals, appropriate consultations between the granting agency and NOAA's Office of Habitat Conservation will be undertaken to avoid, minimize or offset any adverse impacts associated with the research or monitoring ensuring no long-term or cumulative impacts result from the research.

## **6. Finding of No Significant Impact**

NOAA Administrative Order (NAO) 216-6 (revised May 20, 1999) provides eleven criteria for determining the significance of the impacts of a proposed action. These criteria are discussed below with respect to the proposed action (Alternative 2).

### **6.1 Impacts may be both beneficial and adverse-a significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.**

After three years of implementing the CRCGP, no significant adverse environmental impacts have been identified and elevated for further NEPA review. Beneficial effects or impacts of program implementation may, however, be considered as significant with respect to accomplishments associated with the grants that have been awarded and those to be awarded in the future. Each grant action can be identified as chipping away at the problems overwhelming many coral reef environments, especially those associated with human related impacts. Support for meetings, education and outreach, better management plans and better information on which to base the management plans, increased law enforcement provide beneficial impacts not easily quantified, but are necessary for the foreseeable future.

### **6.2 What is the proposed degree to which public health or safety is affected by the proposed action?**

No negative impacts to public health and safety are associated with CRCGP implementation. Public health and safety in some instances will be positively affected. For example, when recommendations for improved water quality conditions in the watersheds emptying into coral reef ecosystem receiving waters are implemented, this

could lead to better health and safety conditions. It is beyond the means of this program to provide the mechanisms (i.e., waste treatment plants) for improving water quality, but the actions in accordance with plans developed could provide initial steps towards cleanup.

**6.3 Are there unique characteristics of the geographic area in which the proposed action is to take place?**

Implementation of the CRCGP involves as many 30-50 separate proposals for funding a year in many areas of the world. The coral reef environments may be considered both unique and fragile and are the subject of the CRCGP. Many actions may occur in these geographic areas that cover large areas of the shorelines and oceans. The purpose of the grants, however, is for their short- to long-term protection and not for exploitation purposes. Not all actions under the CRCGP will occur in or near the reefs.

**6.4 What is the degree to which effects on the human environment are likely to be highly controversial?**

Some management measures recommended to protect reefs and coral fishes could be locally controversial if they recommend or result in requiring modifications to current behavior such as limitations on catch or taking of coral species as a management technique to increase biodiversity or abundance. This is typical response where trade-offs are required, however, any actual changes that may be recommended or occur will be done in accordance with existing laws and through legitimate federal, state, territorial and local governments as necessary. No such issues have been raised since CRCGP implementation, but the potential for controversy surrounding management techniques will always exist and must be reviewed on a project proposal basis.

**6.5 What is the degree to which effects are highly uncertain or involve unique or unknown risks?**

There are no uncertain, unique, or unknown risks associated with the implementation of the CRCGP. While there is much to be learned about coral reef ecosystems, the CRCGP does not envision the use of experimental techniques where impacts and consequences would be unknown to the research or management community.

**6.6 What is the degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration?**

The CRCGP is funded through annual appropriations by the Congress and therefore each year may set precedents for future spending and support of actions. The administrators of the CRCGP however make determinations on what types of projects should be funded and have the opportunity to review past actions prior to taking future actions. There is little probability that any actions will result in significant negative impacts to coral reef



resources. There is a likelihood that certain management techniques to limit human related impacts to coral reefs will lead to more targeted regulation.

**6.7 Does the proposed action have individually insignificant but cumulatively significant impacts?**

Implementation of the CRCGP is designed to have no significant adverse environmental impacts but should result in largely positive environmental impacts through the awarded grants. From a programmatic standpoint, implementation of the CRCGP over the years should result in positive cumulative impacts to coral reef environments through better management of anthropogenic uses and abuses. For example, the installation of mooring buoys so boats can tie onto a buoy rather than throw an anchor on the reef to hold the boat in place will afford greater protection to coral by preventing breakage.

**6.8 What is the degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources?**

The proposed action will not adversely affect any entity listed in or eligible for listing in the National Register of Historic Places. Nor will the proposed action cause the loss of or destroy any significant scientific, cultural, or historic resources. Should a proposed action be designed to increase public action or public education/outreach efforts in facilities or locations that are on the Registry, consultation with appropriate State Historic Preservation Officers will be conducted to ensure no adverse impacts occur to such facilities or if they are to be restored, that the facility meets historic preservation requirements.

**6.9 What is the degree to which endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973, is adversely affected?**

Most coral reef environments are themselves considered as critical habitat to the species found in the ecosystem. The impacts of the management program to these environments will be positive and very beneficial. Research, monitoring, and restoration types of activities may occur in areas where marine turtles, and certain marine mammals like the Hawaiian Monk Seal (*Monachus schauinslandi*) are found and considered as part of the ecosystem. Any research conducted under the CRCGP must comply with all rules and regulations that protect marine mammals and endangered or threatened species.

**6.10 Is a violation of Federal, state, or local law for environmental protection threatened?**

No violation of Federal, state, or local law for environmental protection is anticipated. Three years of funding grants under the CRCGP have resulted in no violation of environmental laws and regulations. In some cases, the funded projects may lead to improvements to such laws (e.g., revisions to rules and regulations in specific MPAs or

Coral Reserves) as it is the intention of the program to provide sound scientific information in support of better management of coral reef resources.

**6.11 Will the proposed action result in the introduction or spread of a non-indigenous species?**

The proposed action will not result in the introduction or spread of non-indigenous species. Certain grants funded under the CRCGP will result in gaining knowledge of the impacts of non-indigenous species in coral reef environments and lead to efforts to reduce or stop the spread of such species in certain geographic areas such as reefs and bays.



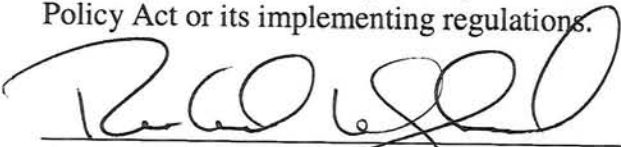
## Finding of No Significant Environmental Impact

### Programmatic Environmental Assessment NOAA Coral Reef Conservation Grant Program

NOAA has prepared the attached Programmatic Environmental Assessment (PEA) for the Coral Reef Conservation Grant Program (CRCGP). The proposed action is the implementation of the CRCGP whose purpose is to provide financial assistance for coral reef conservation projects consistent with the Coral Reef Conservation Act of 2000 and the National Coral Reef Action Strategy. The PEA assesses the potential environmental impacts of (1) the CRCGP; (2) its annually issued Program Guidelines; and (3) the expected types of projects or grant awards to be funded under the CRCGP.

Consequently, this PEA will be used to streamline the overall CRCGP National Environmental Policy Act (NEPA) review process and eliminate duplicative documentation. The PEA will be reviewed every five years in order to ensure that its impact analyses remain current. If not, the PEA will be revised as needed. Additionally, each proposed project will be reviewed in order to determine whether or not its potential environmental impacts have been adequately addressed in this PEA. This review will be conducted by the completion of the NEPA Project Review Checklist contained in Appendix C of the PEA. If this review determines that the proposed project type and its environmental impacts have been analyzed in the PEA, no further NEPA documentation will be completed for that project and the completed Checklist will be included with the other records for that grant award. If the project type or impacts are not analyzed in this PEA, the proposed project will be the subject of an individual NEPA review. Depending upon the degree of the project's potential impacts, this review could involve either the preparation of a categorical exclusion memorandum, an environmental assessment, or an environmental impact statement.

Having reviewed the PEA, I have determined that both the program and project activities assessed within it will not have a significant impact on the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement for the proposed action is not required by Section 102(2)(c) of the National Environmental Policy Act or its implementing regulations.



Assistant Administrator for Ocean Services and  
Coastal Zone Management, NOAA

6/14/05

Date

Assistant Administrator for National Marine Fisheries Service, NOAA

Date

*Richard D. Fosen*

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*6/10/05*

Date

NOAA Coral Reef Conservation Program Matrix Manager

Date



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## Appendix A: Examples of Specific Grants Funded under the categories of the Coral Reef Conservation Grant Program

Project Title	Federal Funding	Description of Activities
<b>Coral Reef Ecosystem Research Grants</b>		
Three New Tools for Reef Monitoring and Risk Assessment: Distinguishing Local from Global Stress (2003)	\$52,874	This project evaluates the factors responsible for coral decline and the ecological parameters that affect the recovery of benthic communities by developing three tools to assess reef condition and providing training to resource managers.
Recruitment of <i>Montastrea annualis</i> (Mountain star coral). Where are all the Larvae Going? (2003)	\$94,015	This project addresses factors affecting recruitment and survival of <i>Montastrea annualis</i> using novel techniques: antibody tracking of potential recruits coupled with passive particle tracking. The overarching question being addressed is: where do all the large batches of <i>Montastrea annualis</i> larvae spawned each year go?
<b>State and Territory Coral Reef Management Grants</b>		
Hawaii Coral Reef Management (2002)	\$360,000	<p>Funding supports a number of project tasks such as:</p> <ul style="list-style-type: none"> <li>- Develop a model collaborative approach for the Department of Land and Natural Resources to use to implement a marine protected area (MPA) where there is community interest.</li> <li>- Support travel to workshops and conferences that will assist managers in coral resource management efforts.</li> <li>- Develop materials to raise awareness about coral reefs to targeted audiences.</li> <li>- Develop and implement cost-effective methods to restore degraded coral reef ecosystems by providing match funding to community based groups who develop and implement conservation programs.</li> <li>- Determine the economic costs and benefits of MPAs to assist in decision-making for a concerted effort to support designation of additional sites.</li> </ul>
Florida Coral Reef Management (2003)	\$325,000	<p>Funding supports two overall project tasks:</p> <ul style="list-style-type: none"> <li>- Mapping coral reefs and other benthic habitats found off the coast of Palm Beach County using high-resolution, shipborn acoustic bottom classification.</li> <li>- Development by an interagency group of three-year local action strategies, which attempt to address major threats to coral reef ecosystems in Southeast Florida.</li> </ul>

The suite of strategies will use knowledge-based, consensus-building, integrated, and continuous management with frequent public review.

### International Coral Reef Conservation

Evaluating Management Effectiveness of two Indonesian MPA's: Incorporating Science and Participation (2002)	\$32,000	This project is a pilot test of the recently developed World Commission on Protected Area management effectiveness guidelines and indicators at two Indonesian sites; Bunaken National Park in North Sulawesi and Sebesi Island Marine Sanctuary in South Sumatra. The roles and limitations of scientific and participatory processes in the design and implementation of MPA management will be investigated evaluations and the existing tools for measuring management effectiveness of MPAs will be improved by developing some guidelines for how to incorporate both science and participation into management evaluations.
Promoting Watershed Management in the Wider Caribbean (2003)	\$70,000	The Soufriere Marine Management Area (SMMA) is managed by the Soufriere Marine Management Association and was established to secure the sustainable use of various resources. This project will seek to establish a permanent interagency structure linked to the SMMA with the prime purpose of securing the necessary interventions in the Soufriere watershed. The aim will be to reduce the harmful inputs into the Soufriere Bay using the same community-focused and partnership approach that was adopted by the SMMA. The project will seek to employ environmentally sound resource-use practices supported by a comprehensive public awareness and sensitization campaign.
Reef Check Community-based Biophysical and Socio-economic Monitoring in East Africa (2002)	\$24,200	Reef Check Foundation-Europe is establishing a Reef Check coral reef monitoring team in Kenya and strengthening the existing team in Tanzania by training and certifying Reef Check trainers who will continue coral reef monitoring activities with new volunteers in their respective areas. The teams are conducting 20 reef surveys during the project year and will submit the final data to the Global Coral Reef Monitoring Network. Results will also be disseminated to local and regional managers.



### **Projects to Amend Coral Reef Fishery Management Plans**

Management of Fisheries in the Gulf of Mexico (2002)	\$250,000	The Council is characterizing the habitat of Pulley's Ridge and the Florida Middle Grounds through mapping, aerial photography and video and still images of resident communities, and is completing multi-beam surveys of the Madison-Swanson MPPA and the adjacent Twin Ridges Contract Area. Within Pulley's Ridge, most of the effort involves development of baseline information on the extent of particular habitat types and community composition, while the Middle Grounds efforts are focused on monitoring and assessment to evaluate change in the area over the last 25 years.
Assessment and Management of Western Pacific Coral Reef Ecosystem Resources and Habitat (2003)	\$750,000	This project is supporting staff, travel and workshop activities needed to assist in gathering critical information in order to facilitate coral reef ecosystem resource management decisions, improve coral reef protection and maintain healthy ecosystems and sustainable fisheries. Specific components include continued mapping of the Northwestern Hawaiian Islands and assessment, characterization and mapping of important bottomfish habitat in the Kaho'olawe Island Reserve (KIR), a study on Hawaii's lobster resources - their cultural significance, biology and life history information, tracking home range sizes of three commercially important fish species in the Managaha Reserve within CNMI, investigation of the diets of taape and some important native fishery species to quantify the level of interactions between native and introduced species, and an evaluation of the use of bait stations as a tool to monitor abundance and size frequency of nearshore and deep-water coral reef ecosystem fish species.

### **State and Territory Coral Reef Ecosystem Monitoring**

American Samoa Coral Reef Monitoring Program (2002)	\$100,000	American Samoa's DMWR supports a series of projects recommended by the local Coral Reef Advisory Group (CRAG). Based on an analysis of data collected during FY2000 and FY2001, the advisory group decided the following six activities represented American Samoa's priorities toward coral ecosystem management, and should be considered for funding under the CRCP: 1) Continued support to assess population dynamics and fishery characteristics for lobsters; 2) A comprehensive macro-algal survey and inventory for the Islands of Manua and Tutuila; 3) A survey of introduced species along the coast of
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		<p>Tutuila; 4) Continued support for local "Reef Check" community monitoring activities; 5) Hiring of a biometrician to analyze the volumes of data being collected under this and other programs; and 6) Mapping benthic habitats using aerial photography and satellite imagery as a spatial framework for future coral reef conservation.</p>
Monitoring and Assessment of Coral Reef Ecosystems in the U.S. Virgin Islands (2003)	\$131,500	<p>This project provides continued support for monitoring sites throughout the USVI using the monitoring protocols established under the FY2002 grant. To improve implementation of the newly established St. Croix East End Marine Park, efforts also will be put into additional assessment of the park resources and toward the development of a Marine Park Monitoring Plan.</p>
<b>General Coral Reef Conservation</b>		
Wise Management and Sustainable Use of the Hawaii Aquarium Fishery through MAC Certification for Reef management and Best Practices (2003)	\$35,000	<p>The project will work with marine aquarium trade stakeholders in Hawaii, especially the industry, to promote the wise management and sustainable use of coral reef resources. Specific elements include: 1) building awareness of management alternatives for a sustainable marine aquarium trade in Hawaii through multi-stakeholder consultations and outreach; 2) developing management plans for reef areas subject to marine ornamentals collection through stakeholder participation; and 3) facilitating marine aquarium fish collectors and companies to understand and achieve Marine Aquarium Council (MAC) Certification for "best practices."</p>
Transforming the Live Reef Fish Food Trade towards Sustainability in the Republic of the Marshall Islands through Community-based Coral Reef Conservation and Fisheries Management (2002)	\$50,000	<p>IMA is working in partnership with government agencies, the College of the Marshall Islands, and local communities to ensure that the growing live reef food fish trade is managed sustainably. The initial work will involve an assessment of the grouper and Napoleon Wrasse fishery and of coral reefs and biological resources in the remote northern atolls of the Marshall Islands; community meetings to improve awareness of the fishery; and the building of capacity to manage the Live Reef Fish Food Trade in a sustainable manner.</p>
Comparative Investigations of Red Hind ( <i>Epinephalus guttatus</i> ) Spawning Aggregations Under Different Management	\$70,000	<p>The project will focus on a collaborative effort between the United States Virgin Islands (USVI) and the British Virgin Islands (BVI) to collect and assimilate biological data on a critical habitat in the BVI with the creation of a Marine Protected Area (MPA) in mind. One component will focus on a</p>



Strategies: fully protected marine reserves in the U.S. Virgin Islands and seasonal closures in the British Virgin Islands (2003)

scientific investigation of a large traditional red hind grouper (*Epinephalus guttatus*) spawning aggregation site in the British Virgin Islands. The spatial area of the aggregation site will be determined as well as the density of spawners, sex ratio, size frequency, habitat type, benthic complexity, and fish community structure. In addition, a tag and release program will be implemented. Data from the Anegada site will be compared to that from the MCD and the use of MPAs as a management technique will be assessed for the sustainability of a fisheries resource.

Coral Culture for Reef Restoration and Coral Research \$43,513

This project is establishing clonal lines of four key coral species, *Acropora cervicornis*, *Montastraea faveolata*, *Porites astreoides* and *Gorgonia ventalina* for use in coral research and restoration activities. Coral fragments and small colonies generated by vessel groundings are being collected from throughout the Florida Keys (as well as larvae from parent colonies of *Porites astreoides* already in culture) and are being propagated at Mote Marine Laboratories Center for Tropical research. Research efforts include quantification of growth rates of the explants, development of standardized clonal lines, and identification of disease resistant strains.

# Appendix B: Table of Grants Awarded Between FY2002-FY2004

## Under the

### Coral Reef Conservation Grant Program for FY2002-2004

Title of Project	Applicant	Type of Applicant	Grant Program	Line/ Program Office	Geographic Region	Jurisdiction	FINAL Grant Amount	Final Match Amount
Assessment and Management of Western Pacific Coral Reef Ecosystem Resources and Habitat	Western Pacific Regional Fishery Management Council	Fishery Management Council	Fishery Management Councils	NMFS/ HC	Pacific	Western Pacific	\$525,000	\$0
Biological Assessment of the Upper Reef Slope Community and Mapping of Benthic Habitats at Bajo de Cico, Puerto Rico	Caribbean Fishery Management Council	Fishery Management Council	Fishery Management Councils	NMFS/ HC	Caribbean	Puerto Rico	\$175,000	\$0
Gulf of Mexico Fishery Management Council	Gulf of Mexico Fishery Management Council	Fishery Management Council	Fishery Management Councils	NMFS/ HC	Atlantic/ Gulf of Mexico	Florida	\$175,000	\$0
South Atlantic Fishery Management Council Coral Reef Conservation Projects to Improve or Amend Coral Reef Fishery Management Plans	South Atlantic Fishery Management Council	Fishery Management Council	Fishery Management Councils	NMFS/ HC	Atlantic	South Carolina	\$183,300	\$0



Building Capacity for St. Croix East End Marine Park	TNC - Eastern Caribbean Program	NGO	General	NMFS/ HC	Caribbean	USVI	\$49,992	\$125,890
REEF Education Enhancement Program	Reef Environmental Education Foundation (REEF)	NGO	General	NMFS/ HC	Atlantic and Pacific	Tropical Western Atlantic (U.S.), Coastal U.S. and Hawaii	\$31,000	\$31,469
Enhancing the Capacity to Inform Effective Management Decisions for the East End Marine Park, St. Croix, U.S. Virgin Islands	The Ocean Conservancy	NGO	General	NMFS/ HC	Caribbean	USVI	\$50,000	\$50,000
Community studies to determine the feasibility and expectations of marine protected area (MPA) management in Vieques, Puerto Rico	University of Miami	University	General	NMFS/ HC	Caribbean	Puerto Rico	\$30,000	\$30,093
Development of a Management Plan for the Cordillera Coral Reef Natural Reserve	Consultores Educativos Ambientales	Consultant	General	NMFS/ HC	Caribbean	Puerto Rico	\$30,000	\$30,000
Managing overfishing and destructive fisheries on coral reefs in The Republic of the Marshall Islands a US Freely Associated State	International Marine life Alliance	NGO	General	NMFS/ HC	Pacific	Marshall Islands	\$40,000	\$40,000
Salva Tres Palmas Campaign	Surfrider Foundation	NGO	General	NMFS/ HC	Caribbean	Puerto Rico	\$49,743	\$67,717

Conserving Coral Reefs on the Big Island of Hawaii through Community Involvement and Strategic Partnerships	Malama Kai Foundation	NGO	General	NMFS/ HC	Pacific	Hawaii	\$50,000	\$56,000
Enhancing MPA Effectiveness: Identification and Assessment of Reproductively Active Serranid Movement and Fishery Vulnerability	University of Guam	University	General	NMFS/ HC	Pacific	Pohnpei, Federated States of Micronesia	\$48,750	\$27,610
A pilot stock enhancement project for grouper in Palau	University of Guam	University	General	NMFS/ HC	Pacific	Palau	\$31,000	\$18,515
Assessment of the status of shark populations in the U.S. Virgin Islands	University of Rhode Island	University	General	NMFS/ HC	Caribbean	USVI	\$20,563	\$20,725
Wise Management and Sustainable Use of the Marine Aquarium Fishery on the Island of Oahu, State of Hawaii, through MAC Certification for Reef Management and Best Practices	Marine Aquarium Council	NGO	General	NMFS/ HC	Pacific	Hawaii	\$34,500	\$34,500
Effects of Habitat and Life History Characteristics on Marine reserve Effectiveness	Washington State University - Vancouver	University	General	NMFS/ HC	Pacific	Hawaii	\$40,000	\$41,543



Saving Philippine Reefs Project	Coastal Conservation and Education Foundation, Inc.	NGO	International	NOS/IPO	Pacific	Philippines	\$35,000	\$35,000
Improving MPA Effectiveness: Designing and Implementing a Biophysical, Socioeconomic, and Governance Monitoring Program for Pohnpei's Local MPA Network	The Conservation Society of Pohnpei	NGO	International	NOS/IPO	Pacific	Pohnpei, Federated States of Micronesia	\$35,000	\$53,966
Rebuilding the Effectiveness of MPA Management at Karimunjawa National Park, Indonesia	Wildlife Conservation Society	NGO	International	NOS/IPO	Pacific	Indonesia	\$25,000	\$25,000
Evaluating Management Effectiveness of Transboundary MPA's: the case of the Turtle Islands Heritage Protected Area in the Sulu Sulawesi Marine Ecoregion	World Wildlife Fund - US	NGO	International	NOS/IPO	Pacific	Philippines, Indonesia, and Malaysia	\$80,000	\$80,000
Enhancing the Management Effectiveness of San Andrés MPA's	The Ocean Conservancy	NGO	International	NOS/IPO	Caribbean	San Andrés Archipelago, Colombia	\$30,000	\$30,000
Enhancing the Management Effectiveness of Marine Protected Areas (MPA's) in the Indo-Pacific	Community Conservation Network	NGO	International	NOS/IPO	Pacific	Vietnam, Philippines, Indonesia, Palau	\$93,000	\$94,056

Increasing Training and Technique Exchange for Siting MPA's in Remote Coral Reef Environments in the Caribbean	Archipelago New Life Foundation	NGO	International	NOS/IPO	Central and South America	Mexico and Colombia	\$39,000	\$51,700
Establishing No-Take Marine Reserves as a Tool for Conservation, Restoration and sustainable Use of Marine Resources in Kuna Yala, Panama	CREA-Panama-Foundation and Balu Uala	NGO	International	NOS/IPO	Central America	Panama	\$30,000	\$30,000
Strategic Designation of British Virgin Islands MPA Network	TNC	NGO	International	NOS/IPO	Caribbean	British Virgin Islands	\$30,000	\$30,510
Understanding movement of Caribbean coral reef fishery species: Improving the design of marine reserves in the Caribbean	Perry Institute for Marine Science	Research Institute	International	NOS/IPO	Caribbean	Bahamas	\$30,000	\$30,000
How Effective are No-Take Areas on Spawning Grounds?: Using acoustic tags to describe the reproductive migrations and spatial ecology of Nassau grouper ( <i>Epinephelus striatus</i> ) on Little Cayman Island	Reef Environmental Education Foundation (REEF)	NGO	International	NOS/IPO	Caribbean	Cayman Islands	\$39,000	\$39,831
Monitoring stakeholder perceptions to improve MPA management effectiveness in Indonesia	TNC - Southeast Asia Center for Marine Protected Areas	NGO	International	NOS/IPO	Pacific	Indonesia	\$15,000	\$15,000



Socioeconomic Monitoring at Negril Marine Park, Jamaica	Negril Coral Reef Preservation Society	NGO	International	NOS/IPO	Caribbean	Jamaica	\$18,000	\$18,000
Measuring Socio-economic impacts of full closure of fish spawning aggregation sites in and around Bunaken National Park, North Sulawesi, Indonesia in the Sulu Sulawesi Marine Ecoregion.	World Wildlife Fund -US	NGO	International	NOS/IPO	Pacific	Indonesia	\$21,000	\$21,000
Establishing a socioeconomic monitoring program for Corales del Rosario and San Bernardo National Natural Park, Colombian Caribbean coastline	Institute of Marine and Coastal Research - INVEMAR	Research Institute	International	NOS/IPO	Caribbean	Colombia	\$15,000	\$15,000
Capacity Building to Expand the Socioeconomic Monitoring Program Throughout the Wider Caribbean Region	UNEP Caribbean Environment Programme Regional Coordinating Unit	International Government	International	NOS/IPO	Caribbean	Caribbean-wide	\$25,000	\$25,132
Guam's FY04 State and Territory Coral Reef Management Grant	Guam Division of Aquatic and Wildlife Resources	Territorial Government	Management	NOS/OC RM	Pacific	Guam	\$290,196	\$39,529
CNMI 2004-2005 Coral Management Grant Proposal	CNMI Governor's Office	Commonwealth Government	Management	NOS/OC RM	Pacific	CNMI	\$360,000	\$182,000

American Samoa Coral Reef Management Grant	American Samoa Government via American Samoa Coral Reef Advisory Group	Territorial Government	Management	NOS/OC RM	Pacific	American Samoa	\$300,111	\$0
Hawaii Coral Reef Management Grant	Hawaii Division of Aquatic Resources Department of Land & Natural Resources	State government	Management	NOS/OC RM	Pacific	Hawaii	\$370,000	\$223,192
Conservation and Management of Puerto Rico's Coral Reefs	PR Department of Natural and Environmental Resources	Commonwealth Government	Management	NOS/OC RM	Caribbean	Puerto Rico	\$200,500	\$20,000
Implementation of the Southeast Florida Coral Reef Initiative Local Action Strategy, Including Mapping	FL Department of Environmental Protection	State government	Management	NOS/OC RM	Atlantic	Florida	\$330,000	\$370,000



Continued Implementation of Management Strategies for the St. Croix East End Marine Park	USVI Department of Planning and Natural Resources	Territorial Government	Management	NOS/OC RM	Caribbean	USVI	\$230,000	\$37,646
CNMI Coral Reef Ecosystems Monitoring Grant	CNMI Office of Coastal Resource Management	Commonwealth Government	Monitoring	NOS/NC COS	Pacific	CNMI	\$98,363	\$0
Kosrae State Coral Reef Ecosystem Monitoring Program	Kosrae Island Resource Management Program	FSM Government	Monitoring	NOS/NC COS	Pacific	Kosrae (FSM)	\$17,000	\$24,374
Palau Coral Reef Monitoring Program	Palau Division of Fish and Wildlife Protection	FAS Government	Monitoring	NOS/NC COS	Pacific	Palau	\$21,716	\$29,116
American Samoa Coral Reef Ecosystem Monitoring	AS- Department of Marine and Wildlife Resources	Territorial Government	Monitoring	NOS/NC COS	Pacific	American Samoa	\$100,034	
Expansion of Coral Reef Monitoring Project (CRMP) to Southeast Florida Coral Reefs	FL Department of Environmental Protection	State government	Monitoring	NOS/NC COS	Atlantic	Florida	\$100,000	\$100,000

State of Hawai'i Coral Reef Monitoring Development Program	Hawaii Division of Aquatic Resources Department of Land & Natural Resources	State government	Monitoring	NOS/NC COS	Pacific	Hawaii	\$108,000	\$90,305
Baseline Characterization and Monitoring of Coral Reef Communities at Desecheo Island, Rincon and Mayaguez Bay, Puerto Rico	PR- Department of Natural and Environmental Resources	Commonwealth Government	Monitoring	NOS/NC COS	Caribbean	Puerto Rico	\$100,000	\$0
Monitoring of Coral Reefs in the U.S. Virgin Islands	USVI Department of Planning and Natural Resources	Territorial Government	Monitoring	NOS/NC COS	Caribbean	USVI	\$130,000	\$0
Guam FY04 State and Territory Coral Reef Ecosystem Monitoring Grant	Guam Division of Aquatic and Wildlife Resources	Territorial Government	Monitoring	NOS/NC COS	Pacific	Guam	\$71,798	\$104,163
A colony-based study of coral survivorship across environmental gradients of the Florida reef tract	Lirman, Diego (U. Miami)	University	Research	OAR/NU RP	Atlantic	Florida	\$15,315	\$15,315
Epidemiology of the coral disease white plague on Florida's reefs	Foley, Janet (UC Davis)	University	Research	OAR/NU RP	Atlantic	Florida	\$17,500	\$17,500



Sponge production and recycling of new nitrogen in coral reef ecosystems	Martens, Chris (U. North Carolina)	University	Research	OAR/NU RP	Atlantic	Florida	\$35,000	\$35,000
A multi-scale investigation of physical-biological coupling on the Florida Keys reef tract	Leichter, James (UCSD)	University	Research	OAR/NU RP	Atlantic	Florida	\$34,746	\$34,746
Barrel sponges on Florida reefs: reproduction, mortality, and bleaching	Pawlik, Joseph (UNCW)	University	Research	OAR/NU RP	Atlantic	Florida	\$15,410	\$15,410
Grouper demographics and habitat engineering in the shelf-edge MPA in the Gulf of Mexico	Coleman, Felicia (Florida State Univ.)	University	Research	OAR/NU RP	Atlantic	Gulf of Mexico	\$16,619	\$16,619
Assessment of threats to Acropora palmata in the Florida Keys: proximal causes and their relative importance to remnant populations	Williams, Dana (U. of Miami)	University	Research	OAR/NU RP	Atlantic	Florida	\$15,410	\$15,410
Cross-habitat community analysis of the effectiveness of a Bahamian marine reserve: contributing to regional understanding of biodiversity for MPA network design	Brumbaugh, Daniel (American Museum for Natural History)	NGO	Research	OAR/NU RP	Caribbean	Lee Stocking Island, Bahamas	\$39,816	\$39,816
Density dependence in exploited marine fish: an experimental test and theoretical exploration of the implications for fisheries enhancement via marine protected areas	Steele, Mark A. (UCSB)	University	Research	OAR/NU RP	Caribbean	Lee Stocking Island, Bahamas	\$26,715	\$26,715

Mechanisms of steroid action in scleractinian corals	Tarrant, Ann M. (Woods Hole Oceanographic Inst.)	University	Research	OAR/NU RP	Caribbean	Lee Stocking Island, Bahamas	\$26,336	\$26,336
Marine reserves and the spillover effect: seascape-scale movements of grouper and snapper	Hixon, Mark A. (Oregon State Univ.)	University	Research	OAR/NU RP	Caribbean	Lee Stocking Island, Bahamas	\$16,682	\$16,682
Using technical diving to study the ecology of deep coral reef communities	Lesser, Michael P. (U. of New Hampshire)	University	Research	OAR/NU RP	Caribbean	Lee Stocking Island, Bahamas	\$19,868	\$19,868
Recovery of <i>Diadema antillarum</i> inside and outside Marine Protected Areas at St. Croix, USVI	Ebersole, John P. (U. of MS)	University	Research	OAR/NU RP	Caribbean	USVI	\$29,102	\$29,102
Effects of globally transported African dust to Caribbean marine ecosystems	Nipper, Marion (Texas A&M)	University	Research	OAR/NU RP	Caribbean	USVI	\$42,800	\$42,800
Comparison of bacterial communities among geographically separated corals infected with white plague type II	Jonas, Robert T.B. (George Mason U.)	University	Research	OAR/NU RP	Caribbean	USVI and Lee Stocking Island, Bahamas	\$20,421	\$20,421
Genetic connections among Pacific staghorn coral populations	Palumbi, Stephen (Stanford University)	University	Research	OAR/NU RP	Pacific	American Samoa, Kingman Reef, Palmyra	\$61,386	\$62,163



The ecology and ecological impact of a highly invasive marine invertebrate in Hawaii's coral reef communities	Grigg, Richard (U. of Hawaii)	University	Research	OAR/NU RP	Pacific	Kauai, Niihau	\$63,472	\$63,472
Ecophysiology and ecology of invasive and native deepwater macroalgae in Hawaii: potential indicators of anthropogenic eutrophication	Smith, Celia (U. of Hawaii)	University	Research	OAR/NU RP	Pacific	Oahu, Maui	\$82,162	\$82,271
An investigation of the current status of the Hawaiian black coral using historical and new perspectives	Montgomery, Anthony (State of HI)	State Government	Research	OAR/NU RP	Pacific	Oahu, Maui, Kauai, Big Island	\$51,240	\$51,240

## Appendix C: NEPA Checklist for Proposed Actions

(Sample)

NOAA Environmental Check List for Proposed Actions \*

Date:

Name:

Project Number:

Detailed project description: (please be as specific as possible; include breakdown of tasks, scope of project, schedule (for example, date construction begins, duration of activities, completion date), budget, points of contact, and any permits required):

PROVIDE PROJECT DESCRIPTION IN THIS SPACE

CONDITION FOR PROPOSED ACTIONS	Present		
	Yes	No	Need Data
1. Is the project covered in this PEA  Consider whether the following: A. The project type is addressed but the applicant is using equipment or methodology not covered in the PEA B. The project type is not covered and requires individual review			
2. Is the action likely to be inconsistent with any applicable, State, Indian tribal, or local law, regulation, or standard designed to protect any aspect of the environment?  Consider whether the action is likely to have effect that would be inconsistent with such authorities as: <ul style="list-style-type: none"><li>• State and territorial coastal zone management plan;</li><li>• State and territorial management plan or regulations that apply to coral reefs and associated habitats or the resources contained therein</li></ul> Also consider whether the applicant has consulted with the respective resource management agency that has authority over the proposed			



work area and whether the action is likely to need a permit under another authority related to environmental protection.			
<p>3. Is the action consistent with priorities identified by National Marine Sanctuaries, National Parks and Monuments for projects being conducted in Federal waters?</p> <p>Consider whether the project addresses the following:</p> <ul style="list-style-type: none"> <li>• All necessary permits have been obtained from the relevant federal agency for the project</li> <li>• The relevant agency has identified this project as a priority,</li> <li>• The project complements ongoing conservation activities conducted by that federal agency</li> <li>• The project will provide information to appropriate resource managers needed to improve management and conservation efforts</li> </ul>			
<p>4. Is the action likely to have results that are inconsistent with locally desired social, economic, or other environmental conditions?</p> <p>Consider whether the action is likely to:</p> <ul style="list-style-type: none"> <li>• Change the use of park land;</li> <li>• Change the use of prime farm lands;</li> <li>• Change the use of a floodplain;</li> <li>• Alter a wetland;</li> <li>• Modify zoning patterns of coral reefs such that the use of certain locations by fishermen, tourists, and stakeholders is restricted or prohibited</li> <li>• Be located on or near a wildlife refuge, a designated wilderness, a wild and science river, a National Natural Landmark, a National Historic Landmark, designated open space, or a designated conservation area or near any other environmentally critical area and have adverse environmental impacts on these areas;</li> <li>• Have adverse visual, social, atmospheric, or other effects on such a critical areas even though it is NOT located on or near the area.</li> </ul>			
5. Is the action likely to result in the, release and/or disposal of toxic, hazardous, or radioactive materials, or in the exposure of people to			

such materials?			
<p>Consider whether the action:</p> <ul style="list-style-type: none"> <li>• Is likely to involve the use of chemicals other than those identified in the PEA for tagging and capture of coral reef organisms that either 1) are known to have detrimental effects on target species, non-target species or the habitats occupied by these species; or 2) have not been previously used and for which the impacts are unknown</li> <li>• Is likely to result in the release and/or disposal of toxic materials into coral reef environments such as laboratory wastes (e.g., fixatives), or other hazardous materials.</li> <li>• Has the potential to result in the release and or dispersal of a pathogen, parasite or other disease-causing agent</li> <li>• Involve the introduction or transplantation of stony corals and other organisms and whether appropriate provisions have been made to ensure that the species are 1) native organisms originally obtained from the local area; 2) they are of a similar genetic diversity to existing populations found in the project area; and 3) for species that were in culture, precautions have been taken to ensure they are being introduced into the wild without the presence of associated predators, pathogens or parasites</li> </ul>			
<p>6. Is the action likely to adversely affect a significant aspect of the aspect of the natural environment?</p> <p>Consider whether the action is likely to:</p> <ul style="list-style-type: none"> <li>• Affect an endangered or threatened species, or its critical habitat;</li> <li>• Affect a species under consideration for listing as endangered or threatened, or its critical habitat;</li> <li>• Alter a natural ecosystem</li> <li>• Involve the use of a particular gear type (e.g., gill nets, traps, bottom trawls etc.) or other destructive equipment that have been shown to have negative impacts to coral reef habitats and are likely to cause significant impacts to the proposed area of work</li> </ul>			
<p>7. Is the action likely to adversely affect a significant aspect of the sociocultural environment?</p> <p>Consider whether the action is likely to:</p>			



<ul style="list-style-type: none"> <li>• Cause changes in the ways members of the surrounding community, neighborhood, or rural area live, work, play, relate to one another, organize to meet their needs, or otherwise function as member of society, or in their social, cultural, or religious values and beliefs. Is the action likely to:</li> <li>• Cause the displacement of fishermen or other coral reef user groups</li> <li>• Affect the economy of the community in ways that result in impacts to its character, or to the physical environment;</li> <li>• Affect any cultural practices (e.g., by prohibiting the harvest of a species that is culturally important)?</li> </ul> <p>Give special attention to whether the action is likely to have environmental impacts on a minority or low income group that are out of proportion with its impacts on other groups. Consider, for example, whether the action is likely to alter such a group's use of coral reef resources.</p> <p>Also consider possible impacts on historic, cultural, and scientific resources. Think about whether the action is likely to have physical, visual, or other effects on:</p> <p>\$</p>			
<p>8. Is the action likely to generate controversy on environmental grounds?</p> <p>Consider first whether your action is likely to be controversial in any way. If so, consider whether this controversy is likely to have an environmental element. For example, the decision to locate a marine protected area in a key fishing ground may be controversial to fishermen who rely on that resource for their livelihood, but this is not an environmental issue unless the relocation of fishermen causes increased damage to surrounding habitats due to concentration of fishing effort</p>			
<p>9. Is there a high level of uncertainty about the action's environmental effects?</p> <p>Consider first whether there is anything you don't know about the action's potential impacts, and then think about whether what you don't know has any significance. For example, .....</p>			

<p>10. Is the action part of an ongoing pattern of actions (whether under the control of GSA or others) that are cumulatively likely to have adverse effects on the human environment?</p> <p>Consider whether the action is related to other actions with impacts that are individually insignificant but that may, taken together, have significant effects. For example, is the action:</p> <ul style="list-style-type: none"> <li>• Part of an ongoing pattern of development that could collectively change the quality of the human environment, such as suburbanization, "gentrification," or urban renewal?</li> <li>• Part of an ongoing pattern of pollutant discharge, traffic generation, economic change, or land-use change in its locality that could collectively affect health or the condition of the environment.</li> </ul>			

<p>11. Is the action likely to have some other adverse effect on public health and safety or on any other environmental media or resources that are not specifically identified above?</p> <p>Consider whether any of the following apply:</p> <ul style="list-style-type: none"> <li>• The applicant will be diving at great depths or in locations characterized by high currents, low visibility and other difficult diving conditions and they do not have the appropriate experience or appropriate dive safety protocols</li> <li>• The applicant is working with pathogens that may or are known to affect public health, and they have not taken precautions to reduce or prevent the potential for release of the pathogen into the environment</li> </ul> <p>The question is designed to allow you to address any potential environmental effects that may be of concern but don't fall into any of the other categories. It implies that everyone is fallible, and that times change, so that effects that are not recognized as serious may be so identified in the future.</p>			
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\* Checklist adapted from PBS NEPA Desk Guide, October 1999.

The checklist is not completed until all "NEED DATA" issues have been resolved and all blocks are checked either "YES" or "NO." Checking a single block to "YES" does not necessarily mean that the application does not fall under the CRCGP PEA; it may be possible to resolve the "YES" answer in another way. For example, disposal of real property to a State agency for historic monument purposes invariably involves historic properties, and thus may affect an aspect of the



socio-cultural environment. However, it is probably safe to assume that the process of review under Section 106 of the NHPA will be sufficient to ensure that such effects are not adverse. So rather than going beyond this PEA, you would ensure that your proposed action complies with Section 106 and its implementing regulations.

Resolve all "NEED DATA" issues and complete the checklist, attaching all supporting documentation. In the "Conclusion" section, circle the conclusion reach. Add the names of the relevant program staff and representatives below the signature block; then sign and date them.

Conclusions (Circle One):

1. The action falls within the CRCGP PEA and requires no further environmental review.
2. The action falls within the CRCGP PEA but requires further review under one or more other environmental authorities.
3. The action requires an environmental impact statement.

Signature of the Principle Investigator

Date





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## *16 USCS § 6401*

### **TITLE 16. CONSERVATION CHAPTER 83. CORAL REEF CONSERVATION**

#### **16 USCS § 6401 (2001)**

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#### **§ 6401. PURPOSES.**

The purposes of this title are--

- (1) to preserve, sustain, and restore the condition of coral reef ecosystems;
- (2) to promote the wise management and sustainable use of coral reef ecosystems to benefit local communities and the Nation;
- (3) to develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems;
- (4) to assist in the preservation of coral reefs by supporting conservation programs, including projects that involve affected local communities and nongovernmental organizations;
- (5) to provide financial resources for those programs and projects; and
- (6) to establish a formal mechanism for collecting and allocating monetary donations from the private sector to be used for coral reef conservation projects.

#### **§ 6402. NATIONAL CORAL REEF ACTION STRATEGY.**

(a) IN GENERAL- Not later than 180 days after the date of enactment of this Act, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and to the Committee on Resources of the House of Representatives and publish in the Federal Register a national coral reef action strategy, consistent with the purposes of this title. The Administrator shall periodically review and revise the strategy as necessary. In developing this national strategy, the Secretary may consult with the Coral Reef Task Force established under Executive Order 13089 (June 11, 1998).

(b) GOALS AND OBJECTIVES- The action strategy shall include a statement of goals and objectives as well as an implementation plan, including a description of the funds obligated each fiscal year to advance coral reef conservation. The action strategy and implementation plan shall include discussion of--

- (1) coastal uses and management;
- (2) water and air quality;
- (3) mapping and information management;
- (4) research, monitoring, and assessment;
- (5) international and regional issues;

- (6) outreach and education;
- (7) local strategies developed by the States or Federal agencies, including regional fishery management councils; and
- (8) conservation, including how the use of marine protected areas to serve as replenishment zones will be developed consistent with local practices and traditions.

#### **§ 6403. CORAL REEF CONSERVATION PROGRAM.**

- (a) GRANTS- The Secretary, through the Administrator and subject to the availability of funds, shall provide grants of financial assistance for projects for the conservation of coral reefs (hereafter in this title referred to as 'coral conservation projects'), for proposals approved by the Administrator in accordance with this section.
- (b) MATCHING REQUIREMENTS-
  - (1) 50 percent- Except as provided in paragraph (2), Federal funds for any coral conservation project under this section may not exceed 50 percent of the total cost of such project. For purposes of this paragraph, the non-Federal share of project costs may be provided by in-kind contributions and other noncash support.
  - (2) WAIVER- The Administrator may waive all or part of the matching requirement under paragraph (1) if the Administrator determines that no reasonable means are available through which applicant can meet the matching requirement and the probable benefit of such project outweighs the public interest in such matching requirement.
- (c) ELIGIBILITY- Any natural resource management authority of a State or other government authority with jurisdiction over coral reefs or whose activities directly or indirectly affect coral reefs, or coral reef ecosystems, or educational or nongovernmental institutions with demonstrated expertise in the conservation of coral reefs, may submit to the Administrator a coral conservation proposal under subsection (e).
- (d) GEOGRAPHIC AND BIOLOGICAL DIVERSITY- The Administrator shall ensure that funding for grants awarded under subsection (b) during a fiscal year are distributed in the following manner:
  - (1) No less than 40 percent of funds available shall be awarded for coral conservation projects in the Pacific Ocean within the maritime areas and zones subject to the jurisdiction or control of the United States.
  - (2) No less than 40 percent of the funds available shall be awarded for coral conservation projects in the Atlantic Ocean, the Gulf of Mexico, and the Caribbean Sea within the maritime areas and zones subject to the jurisdiction or control of the United States.
  - (3) Remaining funds shall be awarded for projects that address emerging priorities or threats, including international priorities or threats, identified by the Administrator. When identifying emerging threats or priorities, the Administrator may consult with the Coral Reef Task Force.



(e) PROJECT PROPOSALS- Each proposal for a grant under this section shall include the following:

- (1) The name of the individual or entity responsible for conducting the project.
- (2) A description of the qualifications of the individuals who will conduct the project.
- (3) A succinct statement of the purposes of the project.
- (4) An estimate of the funds and time required to complete the project.
- (5) Evidence of support for the project by appropriate representatives of States or other government jurisdictions in which the project will be conducted.
- (6) Information regarding the source and amount of matching funding available to the applicant.
- (7) A description of how the project meets one or more of the criteria in subsection (g).
- (8) Any other information the Administrator considers to be necessary for evaluating the eligibility of the project for funding under this title.

(f) PROJECT REVIEW AND APPROVAL-

(1) IN GENERAL- The Administrator shall review each coral conservation project proposal to determine if it meets the criteria set forth in subsection (g).

(2) REVIEW; APPROVAL OR DISAPPROVAL- Not later than 6 months after receiving a project proposal under this section, the Administrator shall--

- (A) request and consider written comments on the proposal from each Federal agency, State government, or other government jurisdiction, including the relevant regional fishery management councils established under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.), or any National Marine Sanctuary, with jurisdiction or management authority over coral reef ecosystems in the area where the project is to be conducted, including the extent to which the project is consistent with locally-established priorities;
- (B) provide for the merit-based peer review of the proposal and require standardized documentation of that peer review;
- (C) after considering any written comments and recommendations based on the reviews under subparagraphs (A) and (B), approve or disapprove the proposal; and
- (D) provide written notification of that approval or disapproval to the person who submitted the proposal, and each of those States and other government jurisdictions that provided comments under subparagraph (A).

(g) CRITERIA FOR APPROVAL- The Administrator may not approve a project proposal under this section unless the project is consistent with the coral reef action strategy under section 203 and will enhance the conservation of coral reefs by--

- (1) implementing coral conservation programs which promote sustainable development and ensure effective, long-term conservation of coral reefs;
  - (2) addressing the conflicts arising from the use of environments near coral reefs or from the use of corals, species associated with coral reefs, and coral products;
  - (3) enhancing compliance with laws that prohibit or regulate the taking of coral products or species associated with coral reefs or regulate the use and management of coral reef ecosystems;
  - (4) developing sound scientific information on the condition of coral reef ecosystems or the threats to such ecosystems, including factors that cause coral disease;
  - (5) promoting and assisting to implement cooperative coral reef conservation projects that involve affected local communities, nongovernmental organizations, or others in the private sector;
  - (6) increasing public knowledge and awareness of coral reef ecosystems and issues regarding their long term conservation;
  - (7) mapping the location and distribution of coral reefs;
  - (8) developing and implementing techniques to monitor and assess the status and condition of coral reefs;
  - (9) developing and implementing cost-effective methods to restore degraded coral reef ecosystems; or
  - (10) promoting ecologically sound navigation and anchorages near coral reefs.
- (h) PROJECT REPORTING- Each grantee under this section shall provide periodic reports as required by the Administrator. Each report shall include all information required by the Administrator for evaluating the progress and success of the project.
- (i) CORAL REEF TASK FORCE- The Administrator may consult with the Coral Reef Task Force to obtain guidance in establishing coral conservation project priorities under this section.
- (j) IMPLEMENTATION GUIDELINES- Within 180 days after the date of enactment of this Act, the Administrator shall promulgate necessary guidelines for implementing this section. In developing those guidelines, the Administrator shall consult with State, regional, and local entities involved in setting priorities for conservation of coral reefs and provide for appropriate public notice and opportunity for comment.

#### **§ 6404. CORAL REEF CONSERVATION FUND.**

- (a) FUND- The Administrator may enter into an agreement with a nonprofit organization that promotes coral reef conservation authorizing such organization to receive, hold, and administer funds received pursuant to this section. The organization shall invest, reinvest, and otherwise administer the funds and maintain such funds and any interest or revenues earned in a separate interest bearing account, hereafter referred to as the Fund, established by such organization solely to support partnerships between the public and private sectors



that further the purposes of this Act and are consistent with the national coral reef action strategy under section 203.

(b) AUTHORIZATION TO SOLICIT DONATIONS- Pursuant to an agreement entered into under subsection (a) of this section, an organization may accept, receive, solicit, hold, administer, and use any gift to further the purposes of this title. Any moneys received as a gift shall be deposited and maintained in the Fund established by the organization under subsection (a).

(c) REVIEW OF PERFORMANCE- The Administrator shall conduct a continuing review of the grant program administered by an organization under this section. Each review shall include a written assessment concerning the extent to which that organization has implemented the goals and requirements of this section and the national coral reef action strategy under section 203.

(d) ADMINISTRATION- Under an agreement entered into pursuant to subsection (a), the Administrator may transfer funds appropriated to carry out this title to an organization. Amounts received by an organization under this subsection may be used for matching, in whole or in part, contributions (whether in money, services, or property) made to the organization by private persons and State and local government agencies.

#### **§ 6405. EMERGENCY ASSISTANCE.**

The Administrator may make grants to any State, local, or territorial government agency with jurisdiction over coral reefs for emergencies to address unforeseen or disaster-related circumstance pertaining to coral reefs or coral reef ecosystems.

#### **§ 6406. NATIONAL PROGRAM.**

(a) IN GENERAL- Subject to the availability of appropriations, the Secretary may conduct activities to conserve coral reefs and coral reef ecosystems, that are consistent with this title, the National Marine Sanctuaries Act, the Coastal Zone Management Act of 1972, the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act of 1973, and the Marine Mammal Protection Act of 1972.

(b) AUTHORIZED ACTIVITIES- Activities authorized under subsection (a) include--

- (1) mapping, monitoring, assessment, restoration, and scientific research that benefit the understanding, sustainable use, and long-term conservation of coral reefs and coral reef ecosystems;
- (2) enhancing public awareness, education, understanding, and appreciation of coral reefs and coral reef ecosystems;
- (3) providing assistance to States in removing abandoned fishing gear, marine debris, and abandoned vessels from coral reefs to conserve living marine resources; and
- (4) cooperative conservation and management of coral reefs and coral reef ecosystems with local, regional, or international programs and partners.

## **§ 6407. EFFECTIVENESS REPORTS.**

(a) GRANT PROGRAM- Not later than 3 years after the date of enactment of this Act, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a report that documents the effectiveness of the grant program under section 204 in meeting the purposes of this title. The report shall include a State-by-State summary of Federal and non-Federal contributions toward the costs of each project.

(b) NATIONAL PROGRAM- Not later than 2 years after the date on which the Administrator publishes the national coral reef strategy under section 203 and every 2 years thereafter, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a report describing all activities undertaken to implement that strategy, under section 203, including a description of the funds obligated each fiscal year to advance coral reef conservation.

## **§ 6408. AUTHORIZATION OF APPROPRIATIONS.**

(a) IN GENERAL- There are authorized to be appropriated to the Secretary to carry out this title \$16,000,000 for each of fiscal years 2001, 2002, 2003, and 2004, which may remain available until expended.

(b) ADMINISTRATION- Of the amounts appropriated under subsection (a), not more than the lesser of \$1,000,000 or 10 percent of the amounts appropriated, may be used for program administration or for overhead costs incurred by the National Oceanic and Atmospheric Administration or the Department of Commerce and assessed as an administrative charge.

(c) CORAL REEF CONSERVATION PROGRAM- From the amounts appropriated under subsection (a), there shall be made available to the Secretary \$8,000,000 for each of fiscal years 2001, 2002, 2003, and 2004 for coral reef conservation activities under section 204.

(d) NATIONAL CORAL REEF ACTIVITIES- From the amounts appropriated under subsection (a), there shall be made available to the Secretary \$8,000,000 for each of fiscal years 2001, 2002, 2003, and 2004 for activities under section 207.

## **§ 6409. DEFINITIONS.**

In this title:

- (1) ADMINISTRATOR- The term 'Administrator' means the Administrator of the National Oceanic and Atmospheric Administration.
- (2) CONSERVATION- The term 'conservation' means the use of methods and procedures necessary to preserve or sustain corals and associated species as diverse, viable, and self-perpetuating coral reef ecosystems, including all activities associated with resource management, such as assessment, conservation, protection, restoration, sustainable use, and management of habitat; mapping; habitat monitoring; assistance in the



development of management strategies for marine protected areas and marine resources consistent with the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) and the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.); law enforcement; conflict resolution initiatives; community outreach and education; and that promote safe and ecologically sound navigation.

(3) **CORAL** - The term 'coral' means species of the phylum Cnidaria, including--

- (A) all species of the orders Antipatharia (black corals), Scleractinia (stony corals), Gorgonacea (horny corals), Stolonifera (organpipe corals and others), Alcyonacea (soft corals), and Coenothecalia (blue coral), of the class Anthozoa; and
- (B) all species of the order Hydrocorallina (fire corals and hydrocorals) of the class Hydrozoa.

(4) **CORAL REEF**- The term 'coral reef' means any reefs or shoals composed primarily of corals.

(5) **CORAL REEF ECOSYSTEM**- The term 'coral reef ecosystem' means coral and other species of reef organisms (including reef plants) associated with coral reefs, and the nonliving environmental factors that directly affect coral reefs, that together function as an ecological unit in nature.

(6) **CORAL PRODUCTS**- The term 'coral products' means any living or dead specimens, parts, or derivatives, or any product containing specimens, parts, or derivatives, of any species referred to in paragraph (3).

(7) **SECRETARY**- The term 'Secretary' means the Secretary of Commerce.

(8) **STATE**- The term 'State' means any State of the United States that contains a coral reef ecosystem within its seaward boundaries, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands, and any other territory or possession of the United States, or separate sovereign in free association with the United States, that contains a coral reef ecosystem within its seaward boundaries.



**ACTION:** Postponement of public meeting.

**SUMMARY:** The National Institute of Standards and Technology announces that it is postponing the public meeting to gather information and data relating to the World Trade Center disaster for building and fire safety purposes, previously scheduled for April 22, 2002.

**DATES:** The meeting previously scheduled for April 22, 2002, from 8 a.m. to 4 p.m. is postponed.

**FOR FURTHER INFORMATION CONTACT:** Stephen Cauffman, (301) 975-6051 or by e-mail at [stephen.cauffman@nist.gov](mailto:stephen.cauffman@nist.gov).

**SUPPLEMENTARY INFORMATION:** On April 8, 2002, the National Institute of Standards and Technology (NIST) announced in the **Federal Register** (67 FR 16728) a public meeting to gather information and data relating to the World Trade Center disaster for building and fire safety purposes. The meeting was scheduled for April 22, 2002, from 8 a.m. to 4 p.m. at the New York Marriott Hotel, Financial Center, in New York, NY.

The meeting will be rescheduled after two critical documents are available to potential presenters at the meeting: (1) The upcoming report on the Building Performance Assessment Team (BPAT) study of the disaster conducted by the coalition led by the American Society of Civil Engineers (ASCE) and sponsored by the Federal Emergency Management Agency (FEMA); and (2) the proposed NIST investigation approach, which will be based in part on the BPAT report. The NIST plan will be made available after the BPAT report is released.

The postponement will allow the public a greater opportunity to provide informed comment on the scope of NIST's plan, which will help guide the planned NIST investigation.

Submissions already received by NIST will be given full consideration when the meeting is rescheduled; those submissions may be amended to reflect the additional information that will be made available to the public.

Dated: April 16, 2002.

**Karen H. Brown,**  
Deputy Director.

[FR Doc. 02-9664 Filed 4-18-02; 8:45 am]

BILLING CODE 3510-13-P

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[Docket No.: 011113275-2037-02; I.D. 030602A]

RIN 0648-ZB11

### Coral Reef Conservation Grant Program Implementation Guidelines

**AGENCY:** National Marine Fisheries Service (NMFS), National Ocean Service (NOS), Commerce.

**ACTION:** Final Implementation Guidelines for the Coral Reef Conservation Program.

**SUMMARY:** This document provides NOAA's Implementation Guidelines (Guidelines) for the Coral Reef Conservation Program (Program) under the Coral Reef Conservation Act of 2000 (Act). The Act authorizes the Secretary of Commerce (Secretary), through the NOAA Administrator (Administrator) and subject to the availability of funds, to provide matching grants of financial assistance for coral reef conservation projects under the Act (Coral Reef Conservation Program). As per the Act, NOAA has developed these Implementation Guidelines for the Program for Fiscal Year (FY) 2002 through FY 2004. Proposed Implementation Guidelines were published in the **Federal Register** for review and comment on December 10, 2001. NOAA will use several existing grant programs and mechanisms to implement the Program. Specific Program information including available funding, dates, and detailed application requirements and proposal evaluation criteria for FY 2002 are published concurrently with these Guidelines in a separate **Federal Register** Notice of Availability of financial assistance for coral reef conservation activities. NOAA is in the final stages of completing the National Coral Reef Action Strategy (Strategy), in consultation with the United States Coral Reef Task Force (USCRTF), as required under the Act. The purpose of the Strategy is to provide an implementation plan to advance coral reef conservation, including basis for funding allocations to be made under the Program. Upon final completion of the Strategy, NOAA will publish notice of the Availability of the Strategy in the **Federal Register** and at: [www.coralreef.noaa.gov/](http://www.coralreef.noaa.gov/). The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the **Federal Register** notice of October 1, 2001, will be applicable to

the funding guidance under this Program. This document is not a solicitation for FY 2002 project proposals.

**DATES:** Effective April 19, 2002.

#### FOR FURTHER INFORMATION CONTACT:

David Kennedy, NOAA Coral Program Coordinator, Office of Response and Restoration, N/ORR, NOAA National Ocean Service, 1305 East-West Highway, Silver Spring, MD 20910, Fax: 301-713-4389; Bill Millhouser, Pacific Regional Manager, CPD/OCRM, N/ORM3, NOAA National Ocean Service, 1305 East-West Highway, Silver Spring, MD 20910, 301-713-3155, extension 189 or e-mail at [bill.millhouser@noaa.gov](mailto:bill.millhouser@noaa.gov); or Tom Hourigan, Biodiversity Program Leader, NOAA Watershed Division, HC-1, NOAA National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910, 301-713-2319, extension 121 or e-mail at [tom.hourigan@noaa.gov](mailto:tom.hourigan@noaa.gov).

#### SUPPLEMENTARY INFORMATION:

##### I. Background

##### A. Overview

The Coral Reef Conservation Act of 2000 was enacted on December 14, 2000, for the following purposes:

1. To preserve, sustain and restore the condition of coral reef ecosystems;
2. To promote the wise management and sustainable use of coral reef ecosystems to benefit local communities and the Nation;
3. To develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems;
4. To assist in the preservation of coral reefs by supporting conservation programs, including projects that involve affected local communities and non-governmental organizations;
5. To provide financial resources for those programs and projects; and
6. To establish a formal mechanism for the collecting and allocating of monetary donations from the private sector to be used for coral reef conservation projects.

Under section 6403 of the Act, the Program authorizes the Secretary, through the Administrator and subject to the availability of funds, to provide matching financial assistance awards for coral reef conservation projects. Section 6408(c) of the Act authorizes up to \$8,000,000 in each of FY 2001 through FY 2004 for projects under the Program.

NOAA will use several existing grant programs and mechanisms to implement the Program. Each fiscal year the Program will publish a **Federal**



**Register** Notice to describe the availability of funds and solicit project proposals. The annual funding guidance, beginning in FY 2002, will provide greater detail on the year's program priorities, application process, and proposal evaluation criteria.

*B. Comments and Responses, and Changes to the Proposed Guidelines*

The following summarizes the comments submitted in response to the Draft Guidelines published in the **Federal Register** on December 10, 2001, and NOAA's responses:

*Comment 1:* A commenter representing the coral reef research community raises concerns regarding the lack of support for long term funding for coral reef research, noting that if the goal of the funding is to support meaningful science and conservation projects, at least half the funds should be earmarked for 3–5 year projects. Moreover, the portion of the Guidelines that gives preference to projects that will be completed within 12 months of award distribution basically precludes funding much high quality, meaningful science, which generally requires multi-year efforts. The commenter notes that this language in Section IX. contradicts statements in Section VII. Funding Categories, and Mechanisms, and Section X. Project Review, which are concerned with long-term coral monitoring data and long-lasting conservation activities.

*Response:* NOAA generally agrees with the comment that there is a need to support a long range coral reef research funding program. However, NOAA is limited in its ability to initiate such an effort given the uncertainty that recent increases in Federal Coral Reef funding will be sustained over the next 3–4 years. Although the FY 2003 budget proposal maintains current funding levels for coral reef conservation activities, there are many competing budget priorities that can affect the final budget. NOAA will further consider funding long range research if continued budget support becomes more certain. In the interim NOAA has added a funding category for coral reef ecosystem research projects for the purpose of developing sound scientific information on the condition of coral reef ecosystems or threats to such ecosystems (see section VII(3) below). In FY 2002, funding under this category will be targeted at improving coral monitoring technologies. In addition, National Ocean Service (NOS) published in the **Federal Register** on February 28, 2002, an announcement of funding opportunity to submit proposals for the coral ecosystem

studies which is for long term coral reef ecosystem research.

*Comment 2:* A commenter with experience in coral reef research states that the proposed guidelines are thorough and that NOAA's focus on education, local partnerships, coral health/vitality, mapping, and restoration is key and much needed. The commenter suggests adding marine protected areas (MPAs) and/or adaptive management research to the list of Eligible Conservation Activities in section V of the Guidelines, citing recommendations from the 9th International Coral Reef Symposium and states that more research is needed on the shape and use of buffer zones in MPA implementation. For example, mixed research results indicate an uncertain relationship between MPA size and success. Clearly more research is needed to dissect the cause and effect relationship between the success of MPAs and their size, location, connectivity, and the association with the surrounding environment.

*Response:* NOAA agrees with the comment as to the need to fund projects which develop a better understanding of the characteristics of successful MPAs. Research activities to improve the design and effectiveness of marine protected areas in coral reef ecosystems are eligible for funding under the State and Territorial coral reef management, general coral reef conservation, regional fishery management council, and international grant categories in FY 2002. We have not changed section V of the Guidelines; however, the language in this section reflects the specific statutory language of section 204(g) of the Act. NOAA is also undertaking such analyses with regard to specific areas of the Florida Key National Marine Sanctuary, and Hawaii and Guam are evaluating the effectiveness of the existing MPAs and beginning to examine the types of issues noted in the comment. In addition, the need for this type of research is specifically noted in several sections of the Strategy (Conduct Strategic Research and Improve The Use of Marine Protected Areas).

A commenter representing coastal states and territories, provides specific comments on a number of sections of the Guidelines:

*Comment 3:* The commenter reiterates the importance of language in Section IV. Applicant Eligibility Requirements, that gives a low priority to grants to Federal agencies and the requirement that proposed Federal agency projects must be in collaboration and coordination with state or local public or non-governmental organizations. The intent of the program is to benefit local

coral reef initiatives within the Pacific and Atlantic Oceans, the Gulf of Mexico, and the Caribbean Sea.

*Response:* NOAA agrees with the comment that the Guidelines should give a low priority to funding Federal agencies, unless specific conditions are met; the final Guidelines maintain the language of the draft Guidelines in this regard. Please note, that section 6403(d)(3) of the Act also provides for the funding of international projects, as provided in the Guidelines.

*Comment 4:* The Strategy should be reconciled and integrated with other required Federal reports and studies such as the U.S. Coral Reef Task Force Oversight Policy, as well as other grants-related requests and information to reduce redundancy and effort.

*Response:* NOAA agrees that the various reporting requirements noted above should be consolidated as much as possible. NOAA will continue to work with state and territorial grantees and the Coral Reef Task Force agencies to address this issue over the coming year.

*Comment 5:* The Guidelines and the Strategy include a discussion of the interrelationship and integrated nature of coral reef management with response to the objectives of the Coastal Zone Management Act and federally approved coastal zone management programs. It is also recommended that the project reporting under the implementation guidelines include information regarding project coordination with the goals and objectives of federally approved coastal zone management (CZM) programs.

*Response:* NOAA believes that coral reef conservation and coastal management share many conservation and management objectives. In most cases, the same state or territorial agency is the lead for both coastal management and coral management functions; in cases where they are not, good local coordination is in place. The Guidelines and the FY 2002 Funding Guidance also require that state and territorial coral reef projects must be developed in partnership with all relevant local agencies, including the coastal zone management, water quality, and the wildlife and/or marine resource agencies. Given the high degree of coordination that currently exists, NOAA does not believe that specific reporting on project coordination with CZM goals is necessary.

*Comment 6:* The language in Section VI instructing the Administrator to consult with the Coral Reef Task force when identifying emerging threats or priorities should be changed from "may" to "shall whenever possible."



The commenter also notes the possible disparity between national and local level priorities, recommends close coordination at the local level to identify priorities for funding and recommends flexibility in determining priorities as they relate to criteria for grant approval.

*Response:* NOAA agrees with the need to carefully balance National goals and priorities with local conditions, objectives and customs. NOAA believes that the Guidelines and the FY 2002 funding guidance provide such a balance. With regard to the suggested language change regarding consultation with the Coral Reef Task Force, the Guidelines restate the statutory language of the Act, section 6403(d); therefore, the language has not been changed. Please note that the Coral Reef Task Force Working Groups, and states and territories have been consulted with, and have had substantial input into, the development of the Strategy.

*Comment 7:* The proposed implementation guidelines, in section VII. Funding Categories and Mechanisms, should be clarified to ensure that while one state agency may be the lead for managing grants or cooperative agreements, funds may be made available for use by any approved state agency.

*Response:* The Guidelines require that state and territorial proposals be developed in partnership with all relevant local agencies and organizations which have responsibilities for the management and conservation of coral reefs in that jurisdiction. The funding provided to any one agency should reflect local priorities and needs and be commensurate with that agency's responsibility and authority to achieve improved protection of coral reef ecosystem resources.

*Comment 8:* The implementation Guidelines should clarify the relationship between the grants or cooperative agreements made pursuant to the Act and these guidelines, and guidance and corresponding authorized cites for each funding category, e.g., the Coastal Zone Management Act (CZMA) section 310; CFDA 11.426; and CFDA 11.463.

*Response:* As noted above, projects funded pursuant to the CZMA and the Act should complement each other. Based on our experience to date, NOAA does not see a need to provide more explicit guidance on this issue.

*Comment 9:* The language in Section X. Project Review relating to state and territorial review of projects, should be changed from "projects in state or

territorial waters" to "projects affecting state territorial waters."

*Response:* NOAA believes the language contained in the draft Guidelines is consistent with the statutory construction of section 6403(f)(2)(A) of the Act which requires review by agencies "with jurisdiction or management authority over coral reef ecosystems in the area where the project is to be conducted." NOAA has therefore retained that language in the final Guidelines. As the commenter has suggested language used in the application of the Federal Consistency provisions of the CZMA, NOAA notes that Federal consistency provisions do apply to Federal funding under the Coral Reef Conservation Program. Applicants should refer to the Coastal Zone Management Act Federal Consistency Regulations at 15 CFR part 930, to ensure compliance with these requirements.

*Comment 10:* A commenter representing a field office of the U.S. Fish and Wildlife Service, agrees with the objective to support coral reef conservation through a grant system. However, the commenter expresses concern that the guidelines are too vague regarding review and approval of projects occurring in areas administered by the Department of the Interior, specifically National Wildlife Refuges. The commenter recommends that the annual solicitations for project proposals inform readers that proposals submitted for activities within National Wildlife Refuges will be reviewed by the Service pursuant to the National Wildlife Refuge System Administration Improvement Act of 1997 and other relevant authorities. The commenter recommends adding a new sentence to Section IX. Application Process (subsection 5), as follows: "Proposed projects within National Wildlife Refuges must be determined by the U.S. Fish and Wildlife Service, pursuant to the National Wildlife Refuge System Administration Improvement Act of 1997, to be compatible with established refuge purposes and management objectives in order for the Service to issue a Special Use Permit to conduct the proposed activities."

*Response:* NOAA agrees with the need for projects that occur within National Wildlife Refuges to obtain all necessary authorizations and permits from the U.S. Fish and Wildlife Service. We believe that the language in Section IX of the guidelines are clear in requiring applicants to submit all applicable Federal permits. We have added language to the end of Section X of the guidelines which states that agencies with jurisdiction over

proposed project, such as the U.S. Fish and Wildlife Service will provide assurance that the applicant is proceeding to obtain a permit or other authorization from that jurisdiction in order to conduct the project, and the status of that process. As noted in Section X(3)(b)(v) of the guidelines, NOAA will require applicants to obtain all required state and Federal permits as a condition of making an award.

*Comment 11:* A commenter representing a U.S. Territory recommends that the process for establishing national priorities include close consultation at the local level. The commenter also recommends shortening the time frame for NOAA's review and approval of proposed projects from 6 months to 2-4 months so that projects may begin on time.

*Response:* NOAA believes that the process used to develop the Guidelines and the Strategy has included adequate consultation regarding local priorities and needs, and further, that the coral grants program provides the necessary flexibility to meet those needs. NOAA agrees with the objective of reducing the time necessary for the review of coral grant applications; we believe the time line described in the FY 2002 is reasonable given the Act's requirements for application review by peers and affected jurisdictions, and NOAA's internal grant process.

In summary the Guidelines have been substantively changed in the following areas:

1. A new funding category has been added at Section VII (3) to provide potential funding for coral reef ecosystem research projects for the purpose of developing sound scientific information on the condition of coral reef ecosystems or threats to such ecosystems.

2. Section X has been modified to request that agencies that are reviewing applications provide NOAA with information on the need for the applicant to obtain a permit or other authorization from the agency in order to conduct the project, and the status of that process.

## II. Electronic Access

The Coral Reef Conservation Act of 2000 and information on the U.S. Coral Reef Task Force, established June 11, 1998 under Executive Order 13089, can be found on the Internet at: <http://www.coralreef.noaa.gov>.

## III. Coral Reef Conservation Program

The objective of the Program is to provide financial assistance for coral reef conservation projects consistent with the Act and the Strategy. NOAA's



role in administering the Program is to strengthen and support the development and implementation of sound coral reef conservation projects, as well as ensure that the most beneficial projects are recommended for funding.

#### IV. Applicant Eligibility Requirements

As per section 6403(c) of the Act, eligible applicants include: Any natural resource management authority of a state or other government authority with jurisdiction over coral reefs or whose activities directly or indirectly affect coral reefs or coral reef ecosystems, or educational or non-governmental institutions with demonstrated expertise in the conservation of coral reefs. Each subcategory of funding under this Program, as described in Section VII of this document, encompasses a specific subgroup of eligible applicants.

As a matter of policy, funding Federal agency activities under this Program will be a low priority unless such activities are an essential part of a cooperative project with other eligible governmental or non-governmental entities. In order for a Federal agency to receive an award under this program, it must provide the requisite statutory authority to receive funds from a federal agency for these purposes. Please note that the Economy Act, 31 USC 1535, is not sufficient legal authority because NOAA is not procuring goods or services from the federal agency.

NOAA agencies are not eligible for funding under this Program, as funding for such activities is provided for under section 6406 of the Act (National Program).

#### V. Eligible Coral Reef Conservation Activities

As described in section 6403(g) of the Act, projects considered for funding under this Program must be consistent with the Strategy, published concurrently in the **Federal Register**. In addition, per the same section, the Administrator may not approve a project proposal unless it will enhance the conservation of coral reefs by addressing at least one of the following:

1. Implementing coral conservation programs which promote sustainable development and ensure effective, long-term conservation of coral reefs;
2. Addressing the conflicts arising from the use of environments near coral reefs or from the use of corals, species associated with coral reefs, and coral products;
3. Enhancing compliance with laws that prohibit or regulate the taking of coral products or species associated with coral reefs or regulate the use and management of coral reef ecosystems;

4. Developing sound scientific information on the condition of coral reef ecosystems or the threats to such ecosystems, including factors that cause coral disease;

5. Promoting and assisting to implement cooperative coral reef conservation projects that involve affected local communities, non-governmental organizations, or others in the private sector;

6. Increasing public knowledge and awareness of coral reef ecosystems and issues regarding their long term conservation;

7. Mapping the location and distribution of coral reefs;

8. Developing and implementing techniques to monitor and assess the status and condition of coral reefs;

9. Developing and implementing cost-effective methods to restore degraded coral reef ecosystems; or

10. Promoting ecologically sound navigation and anchorages near coral reefs.

#### VI. Program Funding and Distribution

Section 6408(c) of the Act authorizes up to \$8,000,000 for use by the Secretary for FY 2001 through FY 2004 for the Program. The number of individual awards to be made each year will depend on the total amount of funds appropriated for coral reef activities within NOAA and the portion of those funds that are allocated to this Program. The total annual Program funding amount, suggested ranges for funding requests, and specific funding categories under which an applicant may choose to apply will be published in the Program's annual **Federal Register** funding guidance.

Program funding awarded during any given fiscal year will be distributed, per section 6403(d) of the Act, in the following manner:

- (1) No less than 40 percent of funds available shall be awarded for coral reef conservation projects in the Pacific Ocean within the maritime areas and zones subject to the jurisdiction or control of the United States;
- (2) No less than 40 percent of funds available shall be awarded for coral reef conservation projects in the Atlantic Ocean, Gulf of Mexico and the Caribbean Sea within the maritime areas and zones subject to the jurisdiction or control of the United States; and
- (3) Remaining funds shall be awarded for projects that address emerging priorities or threats, including international priorities or threats, identified by the Administrator. When identifying emerging threats or priorities, the Administrator may consult with the Coral Reef Task Force.

#### VII. Funding Categories and Mechanisms

In order to ensure adequate funding for each of the purposes envisioned under the Act and provide for a balanced overall Program, existing NOAA programs will be used to award funds in the six funding categories described below. Each of the six categories references the general activity and applicant eligibility requirements associated with proposals submitted therein. Specific activity and applicant eligibility information and proposal evaluation criteria for each category for FY 2002, consistent with Guideline sections IV. Applicant Eligibility Requirements, VI. Funding and Funding Distribution, VIII. Matching Funds, IX. Application Process, and X. Project Review, are found in the FY 2002 funding guidance, published concurrently with these Guidelines.

(1) *U.S. state and territorial government coral reef conservation activities*, as described in Section V(1-10) of the Guidelines (section 6403(g) of the Act) for the purpose of comprehensively managing coral reef ecosystems and associated fisheries within their jurisdictions. Eligibility to receive an award is limited to one agency in each state or territory with jurisdiction over coral reefs, as designated by the respective governors. These proposals will be reviewed and awarded by the National Ocean Service (NOS) Office of Ocean and Coastal Resource Management (OCRM), pursuant to section 310 of the Coastal Zone Management Act, under title, *Coastal Zone Management Program*, CFDA 11.419.

(2) *U.S. state and territorial government coral reef ecosystem monitoring and/or assessment activities*, as described in Section V(8) of the Guidelines (section 6403(g)(8) of the Act). Such activities include the collection, analysis, and reporting of long-term coral reef monitoring data pursuant to scientifically valid methodologies and protocols. Eligible applicants are limited to one natural resource management authority in each U.S. state or territory, or Freely Associated State with jurisdiction over coral reefs, as designated by the respective governors or other applicable senior jurisdictional officials. Cooperative agreements between these agencies and the NOS National Centers for Coastal and Ocean Science (NCCOS) will be developed without competition under title, *Financial Assistance for National Centers of Coastal Ocean Science*, CFDA 11.426.



(3) *Coral reef ecosystem research projects for the purpose of developing sound scientific information on the condition of coral reef ecosystems or threats to such ecosystems*, including research to develop monitoring and assessment technologies, as described in section V(4) of the Guidelines (section 6403(g)(4) of the Act). Eligible applicants include all those described under section 6403(c) of the Act (section IV of the Guidelines). These proposals will be reviewed and awarded by the NOS National Centers for Coastal and Ocean Science under title, *Financial Assistance for National Centers of Coastal Ocean Science*, CFDA 11.426.

(4) *U.S. state, territorial, or other governmental and non-governmental entities, not eligible under other categories*, for the purpose of implementing cooperative coral reef conservation, protection, restoration, research, or education projects, as described in Section V(1-10) of the Guidelines (section 6403(g) of the Act). These proposals will be reviewed and awarded by the National Marine Fisheries Service (NMFS) Office of Habitat Conservation (OHC) under title, *Habitat Conservation*, CFDA 11.463.

(5) *Projects to develop, improve, or amend Fishery Management Plans to conserve, protect and restore coral reef habitats and associated fishery populations within the U.S. Exclusive Economic Zone*, with the overall goal of improving the management of coral reefs and associated organisms through the avoidance of fishing impacts, ecosystem management or similar approaches and practices as described in Section V(3) of the Guidelines (section 6403(g)(3) of the Act). Eligible applicants include Regional Fishery Management Councils with jurisdiction over coral reefs, as established under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*). These proposals will be reviewed and awarded by the NMFS Office of Habitat Conservation under title, *Regional Fishery Management Councils*, CFDA 11.441.

(6) *International coral reef conservation projects for the purpose of implementing cooperative coral reef conservation activities as described in Section V(1-10) of the Guidelines (section 6403(g) of the Act)*. Eligible applicants include all international governmental and non-governmental entities, including those in the Freely Associated States of the Pacific. These proposals will be reviewed and awarded by the NOS International Programs Office or the NMFS Office of Habitat Conservation, as appropriate, under

title, *Habitat Conservation*, CFDA 11.463.

The FY 2002 funding guidance establishes the range of funds available and specific evaluation criteria for each of these six categories. NOAA may add additional funding categories in the annual funding guidance based on available funding and/or coral reef conservation priorities under the Strategy. Applicants will be required to specify in their application the category(s) under which they are applying for funding. Selected applications may be funded and awards administered by NOAA, through either NMFS or NOS. Generally, one award will be made for each proposal accepted for funding.

NOAA will determine the most appropriate funding mechanisms (grant, cooperative agreement, or interagency agreement) for selected individual projects, in consultation with the applicant, based on the type of recipient and on the degree of direct NOAA involvement with the project.

Proposals from non-Federal applicants that are selected for funding will be funded either through a project grant or cooperative agreement. Selected Federal proposals will be funded through interagency agreements; however, under the Program, such agreements must also include a local sponsor of the coral reef conservation project.

#### VIII. Matching Funds

As per section 6403(b)(1) of the Act, Federal funds for any coral conservation project funded under this Program may not exceed 50 percent of the total costs of such project. The match may comprise a variety of public and private sources and can include in-kind contributions and other non-cash support. NOAA strongly encourages applicants to leverage as much investment as possible. Federal funds may not be considered as matching funds.

For applicants who can not meet the match requirement, as per section 6403(b)(2) of the Act, the Secretary may waive all or part of the matching requirement if the Administrator determines that the project meets the following two requirements:

- (1) No reasonable means are available through which an applicant can meet the matching requirement, and
- (2) The probable benefit of such project outweighs the public interest in such matching requirement.

Applicants must specify in their proposal the source and amount of the proposed match and may be asked to provide letters of commitment to

confirm stated contributions. In the case of a waiver request, the applicant must provide a detailed justification explaining the need for the waiver, as described in Section IX(6) of these Guidelines.

Notwithstanding any other provision herein, and in accordance with 48 U.S.C. 1469a(d), this Program shall waive any requirement for local matching funds for any project under \$200,000 (including in-kind contributions) to the governments of Insular Areas, defined as the jurisdictions of the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

#### IX. Application Process

NOAA will publish in the **Federal Register** one annual funding guidance soliciting project proposals, pursuant to these Guidelines. Applications submitted in response to this guidance will be screened for eligibility and conformance with the Program Guidelines.

To submit a proposal, a complete Federal financial assistance awards application package must be filed in accordance with the guidelines in this document and instructions in the Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained the **Federal Register** notice of October 1, 2001.

A more detailed description of specific application requirements will be published in the annual funding guidance; however, pursuant to section 6403(e) of the Act and NOAA, each application must include the following elements:

(1) A cover sheet with the name of the individual or entity responsible for conducting the project;

(2) A description of the qualifications of the individual(s) who will conduct the project;

(3) A succinct statement of the purposes of the project, including the specific geographic location where the project will be carried out;

(4) An estimate of the funds and time required to complete the project including: a detailed breakdown by category of cost estimates as they relate to specific aspects of the project, with appropriate justification for both the Federal and non-Federal shares;

(5) Evidence of support for the project by appropriate representatives of states or other government jurisdictions in which the project will be conducted, including obtaining or proceeding to obtain all applicable State and/or Federal permits, consultations, and



consistencies. U.S. state or territorial applicants must also provide evidence of coordination with all relevant state or territorial agencies, including a list of agencies consulted in developing the proposal;

(6) Information regarding the amount of matching funding available to the applicant. In the case of a waiver request, the applicant must provide a detailed justification explaining the need for the waiver including attempts to obtain sources of matching funds, how the benefit of the project outweighs the public interest in providing match, and any other extenuating circumstances preventing the availability of match;

(7) A description of how the project meets one or more of the goals and objectives stated in Section V of the Guidelines (section 6403(g) of the Act); and

(8) Any other information the Administrator considers to be necessary for evaluating the eligibility of the project for funding under this title.

In order to streamline the application and award process, and to allow NOAA to fully evaluate all coral reef conservation applications in the context of the overall Program, applicants must indicate under which category(s) (as described in Section VII of these Guidelines) they are seeking funds, and are encouraged to submit only one comprehensive application per funding guidance. The Program will give preference to projects where requested funding will be used to complete proposed coral reef conservation activities within a period of 12 to 18 months from the time the awards are distributed.

#### X. Project Review

As per section 6203(f) of the Act, NOAA will review eligible coral reef conservation proposals using an external governmental review and merit-based peer review. After such reviews, NOAA will implement an internal ranking and selection process. The overall project review and selection process will include the following five steps:

1. NOAA will request and consider written comments on the proposal from each Federal agency, state government, or other government jurisdiction, including the relevant regional Fishery Management Councils established under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*), or any National Marine Sanctuary, with jurisdiction or management authority over coral reef ecosystems in the area where the project is to be conducted. Pursuant to this

requirement of the Act, NOAA will apply the following standard in requesting comments:

(a) Proposals for projects in state or territorial waters, including Federal marine protected areas in such waters (e.g., National Marine Sanctuaries), will be submitted to that state or territorial government's designated U.S. Coral Reef Task Force point of contact for comment;

(b) Proposals for projects in Federal waters will be submitted to the relevant Fishery Management Council for comment;

(c) Proposals for projects which require Federal permits will be submitted to the Federal agency which issued the permit for comment;

(d) Proposals for projects in Federal marine protected areas managed by Federal agencies (e.g., National Wildlife Refuges, National Parks, National Marine Sanctuaries, etc.) will be submitted to the respective Federal management authority for comment; and

(e) NOAA will seek comments from other government entities, authorities, and/or jurisdictions, including international entities for projects proposed outside of U.S. waters, as necessary based on the nature and scope of the proposed project.

Specifically, agencies will be requested to comment on: the extent to which the project is consistent with its coral reef conservation objectives, priorities and projects; whether the project has been coordinated with existing or planned projects; suggestions for improving project coordination and/or technical approach; the need for the applicant to obtain a permit or other authorization from the agency in order to conduct the project, and the status of that process; and, appropriate staff points of contact. Each entity will be provided 21 days to review and comment on subject proposals. Comments submitted will be part of the public record.

2. Each NOAA Program Office will provide for a merit-based peer review and standardized documentation of that review for proposals considered appropriate for funding under their respective category(s). Each proposal will be reviewed by a minimum of three individuals with knowledge of the subject of the proposal. The identities of the peer reviewers will be kept anonymous, to the extent permitted by law. Specific evaluation criteria for projects submitted under each funding category will be published in each annual **Federal Register** funding guidance.

3. Each NOAA Program Office will subsequently implement an internal review process to rank each proposal that is appropriate for funding under their program based upon consideration of: comments and recommendations from the reviews under paragraphs (1) and (2), and their evaluation of each proposal using the following five equally weighted criteria:

(a) *Direct Benefit to Coral Reef Resources and Ecosystems*: NOAA will evaluate proposals based on the potential of the project to meet goals and objectives as stated in this document, per section 6403(g) of the Act.

(b) *Technical Merit and Adequacy of Implementation Plan*: Proposals will be evaluated on the technical feasibility of the project and the qualifications of project leaders and/or partners based on demonstrated abilities to:

(i) Deliver the conservation objective stated in the proposal;

(ii) Provide educational benefits, where appropriate;

(iii) Incorporate assessment of project success in terms of meeting the proposed objectives;

(iv) Demonstrate that the conservation activity will be sustainable and long-lasting; and,

(v) Provide assurance that implementation of the project will meet all state environmental laws and Federal consistency requirements by obtaining or proceeding to obtain applicable permits and consultations.

(c) *Past Performance*: Proposals will be evaluated on the previous accomplishments of the applicants in achieving coral reef conservation objectives similar to those outlined in Section V. Eligible Coral Reef Conservation Activities of these Guidelines. Applicants submitting their first coral reef conservation project should document past experience in related activities.

(d) *Consistency with the National Coral Reef Action Strategy and the National Action Plan to Conserve Coral Reefs*: Proposals will be evaluated on how well they meet the specific programmatic goals and objectives of the National Coral Reef Action Strategy, developed pursuant to section 6402 of the Act, and the *National Action Plan to Conserve Coral Reefs* (U.S. Coral Reef Task Force, 2000), <http://www.coralreef.noaa.gov>. Applicants are strongly encouraged to review both documents and identify specific conservation objectives that their project proposal will address.

(e) *Cost-effectiveness and Budget Justification*: Proposals will be evaluated on their ability to demonstrate



that significant benefit will be generated for the most reasonable cost. Projects will also be reviewed in terms of their need for funding and the ability of NOAA funds to act as a catalyst to implement projects and precipitate partnerships and other sources of funding to achieve conservation objectives. Preference will be given to projects that will be completed within a period of 12 to 18 months from the time the awards are distributed.

4. A NOAA review panel made up of representatives from each NOAA Program Office will review the project selections and ensure that all requirements of the Act are met, particularly those regarding the geographic funding distribution and consistency with the Strategy. This group will present recommendations to the NOAA Administrator, or his designee, for final approval. NOAA reserves the right to consult with applicants, prior to making an award, to determine the exact amount of funds to be awarded, as well as the most appropriate funding category and mechanism under which to consider the project for funding.

5. NOAA will provide written notification of a proposal's approval or disapproval to each applicant within 6 months of submitting a coral reef conservation proposal. Similarly, NOAA will also provide written notification of a project's approval to each State or other government jurisdiction that provided comments and/or reviews. Unsuccessful proposals will be held in the Program Office until the cooperative agreement or grant is awarded to the selected recipients and then will be destroyed.

#### Definitions

##### In this Program:

(1) *Administrator* means the Administrator of the National Oceanic and Atmospheric Administration.

(2) *Conservation* means the use of methods and procedures necessary to preserve or sustain corals and associated species as diverse, viable, and self-perpetuating coral reef ecosystems, including all activities associated with resource management, such as assessment, conservation, protection, restoration, sustainable use, and management of habitat; mapping; habitat monitoring; assistance in the development of management strategies for marine protected areas and marine resources consistent with the National Marine Sanctuaries Act (16 U.S.C. 1431 *et seq.*) and the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*); law enforcement; conflict resolution

initiatives; community outreach and education; and that promote safe and ecologically sound navigation.

(3) *Cooperative Agreement* means a legal instrument reflecting a relationship between the Department of Commerce (DoC) and a recipient whenever: (1) The principal purpose of the relationship is to transfer money, property, services or anything of value to accomplish a public purpose of support or stimulation authorized by Federal statute, and (2) substantial involvement (*e.g.*, collaboration, participation, or intervention by DoC in the management of the project) is anticipated between DoC and the recipient during performance of the contemplated activity.

(4) *Coral* means species of the phylum Cnidaria, including—

(a) all species of the orders Antipatharia (black corals), Scleractinia (stony corals), Gorgonacea (horny corals), Stolonifera (organpipe corals and others), Alcyonacea (soft corals), and Coenothecalia (blue coral), of the class Anthozoa; and,

(b) all species of the order Hydrocorallina (fire corals and hydrocorals) of the class Hydrozoa.

(5) *Coral Reef* means any reefs or shoals composed primarily of corals.

(6) *Coral Reef Ecosystem* means coral and other species of reef organisms (including reef plants) associated with coral reefs, and the non-living environmental factors that directly affect coral reefs, that together function as an ecological unit in nature.

(7) *Coral Products* means any living or dead specimens, parts, or derivatives, or any product containing specimens, parts, or derivatives, of any species referred to in paragraph (3).

(8) *Grant* means a legal instrument reflecting a relationship between DoC and a recipient whenever: (1) The principal purpose of the relationship is to transfer money, property, services, or anything of value in order to accomplish a public purpose of support or stimulation authorized by Federal statute and (2) no substantial involvement is anticipated between DoC and the recipient during the performance of the contemplated activity.

(9) *Interagency Agreement*, for the purposes of these Guidelines, means a written document containing specific provisions of governing authorities, responsibilities, and funding, entered into between NOAA and another Federal agency where NOAA is funding the other Federal agency, pursuant to the Act.

(10) *Secretary* means the Secretary of Commerce.

(11) *State* means any State of the United States that contains a coral reef ecosystem within its seaward boundaries, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands, and any other territory or possession of the United States, or separate sovereign in free association with the United States, that contains a coral reef ecosystem within its seaward boundaries.

#### Classifications

This is a new Program and will be added to the Catalog of Federal Domestic Assistance under the Coastal Zone Management Act (11.419), Financial Assistance for National Centers for Coastal Ocean Science (11.426), and Habitat Conservation (11.463). The Program uses the Federal financial assistance award package requirements per 15 CFR parts 14 and 24.

The program will determine National Environmental Policy Act (NEPA) compliance on a project by project basis.

This action has been determined to be not significant for purposes of Executive Order 12866.

Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

The use of the Federal financial assistance award package referred to in this notice involves collection-of-information requirements subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, and SF-LLL have been approved by OMB under the respective control numbers 0348-0043, 0348-0044, 0348-0040, and 0348-0046.

The Guidelines also contain new collection-of-information requirements subject the Paperwork Reduction Act and which have been approved by OMB under control number 0648-0448. Public reporting burden for these collections of information is estimated to average one hour per request for a matching funds waiver (section IX(6) of these Guidelines) and one hour per comment on proposals (section X(1) of these Guidelines). These estimates include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any other aspect of these data collections, including suggestions for reducing the burden, to the NOAA Office of Response and Restoration, N/ORR, NOAA National Ocean Service, 1305 East-West Highway, Silver Spring, MD 20910 and to Office of Management



and Budget (OMB) at the Office of Information and Regulatory Affairs, OMB, Washington, DC 20503, Attention: NOAA Desk Officer.

Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the Paperwork Reduction Act, unless that collection displays a currently valid OMB control number.

Dated: April 15, 2002.

Alan Neuschatz,

Acting Assistant Administrator for Ocean Services and Coastal Zone Management.

[FR Doc. 02-9682 Filed 4-18-02; 8:45 am]

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[Docket No.: 011113275-2038-03; I.D. 030602B]

RIN 0648-ZB11

### Coral Reef Conservation Grant Program Fiscal Year 2002 Funding Guidance

**AGENCY:** National Marine Fisheries Service (NMFS), National Ocean Service (NOS), Commerce.

**ACTION:** Notice of Availability of Federal assistance for coral reef conservation activities.

**SUMMARY:** The purpose of this document is to advise the public that the National Oceanic and Atmospheric Administration (NOAA) is soliciting proposals for the NOAA Coral Reef Conservation Grant Program (Program), pursuant to the Coral Reef Conservation Act of 2000 (Act). The Act authorizes the Secretary of Commerce (Secretary), through the NOAA Administrator (Administrator) and subject to the availability of funds, to provide matching grants of financial assistance for coral reef conservation projects under the Program. This document provides the specific Fiscal Year (FY) 2002 Funding Guidance (Guidance) necessary to award \$5,500,000, of which NOAA is providing \$5,150,000 and the Department of Interior is providing \$350,000 in Federal assistance, consistent with the NOAA Coral Reef Conservation Grant Program Implementation Guidelines (Guidelines), published concurrently with this Guidance. The Proposed Guidelines were published in the *Federal Register* for public comment on December 10, 2001. The information

published in this Guidance includes: specific program eligibility criteria, available funding, proposal submission and selection dates, and detailed application requirements and proposal evaluation criteria. All applications submitted pursuant to this notice must be consistent with the requirements stated herein and in the Guidelines, and be consistent with the National Coral Reef Action Strategy (Strategy). NOAA is in the final stages of completing the Strategy, in consultation with the United States Coral Reef Task Force (USCRTF), as required under the Act. The purpose of the Strategy is to provide an implementation plan to advance coral reef conservation, including a basis for funding allocations to be made under the Program. Upon final completion of the Strategy, NOAA will publish notice of the Availability of the Strategy in the *Federal Register* and at: [www.coralreef.noaa.gov/](http://www.coralreef.noaa.gov/). Until such notice is provided, NOAA and applicants for coral reef grant funds provided under this notice shall use the *National Action Plan to Conserve Coral Reefs* (National Action Plan), dated March 2, 2000, in place of the Strategy. The Strategy and the National Action Plan share the same basic goals and objectives, thereby ensuring that the National Action Plan can provide sufficient guidance for the development and review of grant applications pursuant to this notice. The National Action Plan can be found at: <http://coralreef.gov/>. Applicants may also request copies of the National Action Plan from the contacts listed below.

**DATES:** Effective April 19, 2002.

**ADDRESSES:** Send all proposals to: David Kennedy, NOAA Coral Program Coordinator, Office of Response and Restoration, N/ORR, Room 10102, NOAA National Ocean Service, 1305 East-West Highway, Silver Spring, MD 20910, Fax: 301-713-4389. Only written proposals will be accepted, no electronic mail applications will be accepted. Envelopes or faxes should be sent to the attention of one of the following proposal categories, as appropriate: State and Territory Coral Reef Management; Coral Reef Monitoring and Research; General Coral Reef Conservation; Projects to Improve or Amend Coral Reef Fishery Management Plans; and International Coral Reef Conservation.

**FOR FURTHER INFORMATION CONTACT:** See **SUPPLEMENTARY INFORMATION** for telephone and e-mail addresses of contacts for this program.

**SUPPLEMENTARY INFORMATION:**

### Contacts for Specific Information

Administrative questions should be directed to Bill Millhouser, 301-713-3155, extension 189 or e-mail at [bill.millhouser@noaa.gov](mailto:bill.millhouser@noaa.gov).

Technical point of contact for State and Territory Coral Reef Management is Bill Millhouser, 301-713-3155, extension 189 or e-mail at [bill.millhouser@noaa.gov](mailto:bill.millhouser@noaa.gov).

Technical point of contact for State and Territory Coral Reef Monitoring and Research is Ruth Kelty, 301-713-3020, extension 133 or e-mail at [ruth.kelty@noaa.gov](mailto:ruth.kelty@noaa.gov).

Technical point of contact for General Coral Reef Conservation is Tom Hourigan, 301-713-2319, extension 121 or e-mail at [tom.hourigan@noaa.gov](mailto:tom.hourigan@noaa.gov).

Technical point of contact for Projects to Improve or Amend Coral Reef Fishery Management Plans is Tom Hourigan, 301-713-2319, extension 121 or e-mail at [tom.hourigan@noaa.gov](mailto:tom.hourigan@noaa.gov).

Technical point of contact for International Coral Reef Conservation is Arthur Paterson, 301-713-3078, extension 217 or e-mail at [arthur.e.paterson@noaa.gov](mailto:arthur.e.paterson@noaa.gov).

NOAA announces the availability of \$5,500,000 of Federal assistance in FY 2002 for Coral Conservation Activities. NOAA is providing \$5,150,000 and the Department of Interior (DOI) is providing \$350,000. These funds will be used to support the following six program areas: State and Territory Coral Reef Management; State and Territory Coral Reef Monitoring; State and Territory Research to support monitoring technologies; General Coral Reef Conservation; Projects to Improve or Amend Coral Reef Fishery Management Plans; and International Coral Reef Conservation. The amount of funds available, and the application requirements for each program area are defined in Sections IV-IX of this notice. Selected recipients will enter into either a cooperative agreement with the NOAA Office responsible for the program or receive a grant depending upon the amount of NOAA's involvement in the project. Substantial involvement means a cooperative agreement, while independent work requires a grant.

All applicants are required to submit a Federal financial assistance awards package and proposal write-up as described in the relevant program section below. The financial assistance awards package (which includes forms SF-424, SF-424A, SF-424B, CD-511, CD-512, and SF-LLL) can be obtained from the NOAA grants Website at <http://www.rdc.noaa.gov/grants/pdf>. For each proposal submitted, applicants are required to prepare one original and two